

**Office Of River Protection
Tri-Party Agreement Milestone Review
Meeting Minutes
February 28, 2006**

Approval:

J. Hedges*Ecology IAMIT Representative*

(H0-57)

Date:

5/18/06

Approval:

J. R. Eschenberg/Z. Smith*DOE IAMIT Representative*

(H6-60)

Date:

5/18/06

Approval:

N. Ceto*EPA IAMIT Representative, Chairperson*

(B1-46)

Date:

5/18/06

Minutes Prepared by:

Sonya Moore*Fluor Hanford, Inc.*

(H8-40)

Date:

5-23-06

Anderson, F.J.	CH2M	H6-03	Luke, J.J.	CH2M	H6-03
Bartus, D.B.	EPA	H0-57	Lyon, J.J.	Ecology	H0-57*
Bohnee, G.	NPT		Mauss, B.M.	ORP	H6-60
Brown, M.J.	Ecology	H0-57*	McCormick, M.S.	RL	A5-11
Burandt, M.E.	ORP	H6-60	Morrison, R.D.	FH	H8-12*
Caggiano, J.A.	Ecology	H0-57	Nicoll, B.L.	ORP	H6-60
Ceto, N.	EPA	B1-46	Niles, K.	OOE*	
Chalk, S.	RL	A7-75	Noyes, D.L.	ORP	H6-60
Cimon, S.	ODE		Olinger, S.J.	ORP	H6-60
Colosi, K.A.	CH2M	S7-67	Pacheco, L.	ORP	H6-60
Cusack, L.J.	Ecology	H0-57*	Parnell, K.	ORP	H6-60
Dahl, S.L.	Ecology	H0-57	Piippo, R.	FH	H8-12*
Ensign, K.R.	ORP	H6-60	Quintero, R.A.	ORP	H6-60
Eschenberg, J.R.	ORP	H6-60	Russell, R.W.	ORP	H6-60*
Furlong, P.T.	ORP	H6-60	Schmorde, F.A.	CH2M	R3-25
Harris, S.	CTUIR*		Skinnarland, R.R.	Ecology	H0-57*
Hebdon, J.B.	RL	A5-15	Smith, T.Z.	ORP	H6-60
Hedges, J.	Ecology	H0-57	Stevens, A.J.	ORP	H6-60
Henry, D.	OOE*		Uziemblo, N.H.	Ecology	H0-57
Horst, L.	OOE*		Voogd, J.A.	CH2M	H6-03
Huffman, L.A.	ORP	H6-60.	Wolf, A.	CTUIR	
Jackson, D.E.	RL	A4-52			
Jentzen, B.K.	Ecology	H0-57	Administrative Record	EDMC	H6-08*
Jim, R.	Yakama*			ORP	
LaMont, P.E.	ORP	H6-60		slm	
Louie, C.S.	ORP	H6-60*		5-23-06	

*w/Attachment

**Office Of River Protection
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General Discussion

Start: 9:20 a.m.

End: 11:20 a.m.

Discussed updates to the ORP Quarterly Milestone Review handout. Changes to the FY 2006 Milestone performance bar chart (page 4); five Milestones (MS) that were previously scheduled as 'at risk' are now 'unrecoverable.' Change packages addressing these MS will be submitted in the near future, with the first one for M-45-02M due in today. M-48-07A(2) is an internal or discreet MS; the due date will be moved out to 6-30-06. MS M-45-55-T04 and M-62-08 change packages are in the process of development.

M-48-07 was completed in December 2000 with the submittal of a disposition plan for the isolation and monitoring of DST components not in use after June 30, 2005. Within that plan, there was the commitment to complete isolation of the listed components by June 30, 2006. We are not going to be able to meet that date.

Executive Summary

Chemicals of Potential Concern (COPC) samples taken in C and AN Farms during the retrieval of Tank 241-C-103 are undergoing analysis. These samples likely represent bounding vapor conditions associated with waste disturbing activities. There was no major iron disposition within the in-container vitrification (ICV) box sumps of the Demonstration Bulk Vitrification System large-scale test 38B. Forwarding critical decision (CD) packages CD-0 and 1 to HQ. Most of the work on the Integrated Disposal Facility (IDF) is complete with the Draft Criticality Evaluation Report, initiation of the Leachate Tank Liner installation, and physical construction of trench. There is no anticipation of a criticality event based on this report.

ACTION: Send a copy of the 241-C-103 SAP to Ecology.

Single-shell tank (SST) waste retrieval activities continued during the month. Approximately 20% of the waste was retrieved from Tank 241-C-103. C-201 retrieval continues and is nearing the final point. The first phase of the successful demonstration of Tank 241-S-112 resulted in break-up of 80% of the hard heel waste. There is approximately 6,000 gallons left in that tank. Retrieval of Tank 241-S-102 is about 54 % complete and remains on standby, ready to operate when resources are available and double-shell tank (DST) space constraints are resolved.

Milestone Status

M-45-00B, Complete Specified “Near-Term SST Waste Retrieval and Interim Closure Activities, to Result in the Retrieval of al Tank Wastes in WMA-C SSTs Pursuant to the Agreement Criteria in Milestone M-45-00.

Due: 9-30-06

Status: The status of this milestone has been changed to unrecoverable. This is due to completions of limits of technology retrieval demonstrations. We are nearing completion of C-201 and will be starting C-204 sometime in April. Start of retrieval for C-101 is projected for FY 08.

Implementation of full-scale LDMM technologies – High Resolution Resistivity (HRR) injection test is continuing at Tank S-102. On track to having all field work complete and the evaluation report complete by the end of August.

Submittal of TWRWPs – for C-101 there are still some comments that we need to resolve; will try to close out in the next month or two with Ecology. It is estimated by the end of April we could come to some conclusion. We do not foresee any changes for the next two years, but it is difficult to predict what might occur in that time. We have a group of people in place who have reviewed and completed documents in the past and we would like to pursue to conclusion with the same group of people. There have been some minor changes that have worked fairly smoothly so we don't view this as problem.

FY to date reflects a negligible unfavorable schedule variance (SV) of \$0.5M and a favorable cost variance (CV) of \$7M, which is consistent with funding levels of FY 07. Working on a baseline update for scope that is not going to be performed. Baseline data is actual level of FY 06 based on approved baseline.

M-45-05-T05 through M-45-05-T15, Initiate Tank Retrieval from Additional SSTs.

Due: 9-30-07 thru 9-30-17.

Status is 'at risk.' Although the retrieval on tanks is at risk, the major milestone, M-45-00, is currently still projected as on schedule since it is not due until 2024.

M-45-02M, Submit Biennial Updates to SST Retrieval Sequence Document, DST Space Evaluation Document and Ecology Concurrence of Additional Tank Acquisition.

Due: 3-1-06.

Status: The status of this milestone is unrecoverable. We will submit a CR by the end of today. There is too much uncertainty within the mission to be able to provide a realistic evaluation at this time. This is largely due to the WTP startup and how many retrievals we can expect to be funded over the next few years. We should have the information needed to resolve this by late this summer and will prepare a better document. Less funding and more DST space until treatment technology comes on board. Ecology is unhappy with this situation and feel that ORP was well aware of the DST issues and should have addressed it.

ACTION: Share with management that Ecology is unhappy about this situation.

The recovery plan for missing this milestone will come in the form of a change package.

M-45-05A, Complete Initial Waste Retrieval from Tank S-102

Due: 3-31-07.

M-45-15, Interim Completion of Tank S-102 SST Waste Retrieval and Closure Demonstration Project.

Due: 12-31-07

Status: The status for both of these milestones is 'at risk' and they have been extended to FY 08.

241-S-102 has been put on active standby while work is continuing on 241-S-112. S-112 is not scheduled for completion until 12-31-07; Ecology questioned if we were going to wait until then to retrieve liquid from S-102. It is expected that we will start work on S-102 before August.

The liquid level in S-102 is increasing and we are running detection tests on high level activity. We are balancing resources between S-102 and S-112 to keep them occupied over an extended period of time. We are not progressing as quickly with the current plan as we would have with the previous plan. Getting rid of pumpable liquids is the environmental goal. Ecology is concerned that we are informing the public that all pumpable liquids are out of the tank when in fact this is not true.

ACTION: Provide Ecology with a schedule for 241-S-102 retrieval.

M-45-13, Interim Completion of Tank S-112 SST Waste Retrieval and Closure Demonstration Project.

Due: 12-31-07

Status: We will successfully disintegrated hard heels on schedule. There are ~6,000 gallons of waste left in the tank.

Accelerated C-Farm Tank Retrievals. Tank C-203 – 1-18-06 is the actual date we submitted the RDR to Ecology; we are working on their comments. C-201 – we are within a couple of days of the Complete Retrieval Date.

Ecology asked if we could be operating S-112 and C-103 at the same time with current resources.

ACTION: Respond to Ecology on above question.

ACTION: In the Retrieval Data Report ... change Ecology to "Ecology/EPA."

This table does not reflect FY07 budget but the actual FY06 budget.

Accomplishments: Page 42, third bullet should state C-201.

Action from last meeting: Set up a meeting between us and Ecology - Complete.

M-46-21, Complete Implementation of DST Space Optimization.

Due: 12-31-05

Status: Milestone completed on 12-15-05. This was a major milestone completion representing a significant amount of work by Ecology, DOE, and expert panels from offsite. We have a feed control list for WTP that is controlled at the DOE level. Consolidation of hot commissioning feed has been authorized, but transfers will not occur immediately.

M-47-00, Complete Work Necessary to Support Acquisition and Phase I Operations of Hanford Site High Level Radioactive Waste TSD Facilities.

Status: Ahead of schedule (will not discuss given time constraints).

M-45-50, -60, Single-Shell Tank Corrective Action.

Status: At Risk. Change packages are being prepared for these milestones. ORP will submit the change packages sequentially by due date, the first of which will be within a couple of weeks. The schedule is being affected as the data has yet to be collected.

Accomplishments: Completed demonstration at mock tank site for using hydraulic hammer to push at 30, 45, and 60 degrees of vertical. We will be entering C farm to do angle pushes beneath the contamination level. Entered S farm as part of an interim short study in conjunction with SRR at S-102; that data will help evaluate what is going on with the farm.

Completed data gathering and will have the Surface Geophysical Exploration (SGE) report on T farm near the end of March. The second data collection for S farm can not occur until May.

ACTION: Present this information to Ecology as soon as it is available.

Planned Actions: The vertical direct pushes at B, X, and T should be finishing early this summer. Ecology asked if we had a work plan for this activity and stated they would like to review it. We have a draft going through evaluation to show the viability of direct push as a technique which includes C farm. Ecology expressed concern that we were doing work in an area we haven't been in before with equipment we haven't used. They want to be sure they are informed of our activities.

ACTION: Ensure Ecology is informed of our activities for this work scope.

Issues: Change package for scope and schedule modifications of the Field Investigations and Reporting Milestones is in preparation. The test plan for SGE work is currently going through review. Comment resolution for TTX is still open.

M-23, Tank Integrity and Monitoring. This is on schedule.

Interim Stabilization Consent Decree

Some tanks appear to be out of interim stabilization criteria due to changes in the liquid levels, which changes the inventory amount. There were 29 tanks in the consent decree, and those have been interim stabilized. Some tanks have been identified in the Hanlin report as exceeding interim stabilization criteria. Those tanks were not part of the original 29, and were not actively retrieved. There is a carry over action from last meeting for CHG to report to ORP.

ACTION: Schedule a meeting to determine why the liquid levels are changing.

M-48-14, Submit Written Integrity Report for the DST System.

Due: 3-31-06.

Status: A letter was sent to Ecology on 12-21-05 but we have not received a response. The integrity report will be submitted after we have pressure tested a number of lines.

ACTION: Ecology will respond to ORPs 12-21-05 letter.

M-48-15, Submit a Report to Ecology for the Re-examination of Six DSTs by Ultrasonic Testing.

Due: 9-30-07.

Status: On schedule.

M-48-07A, Complete Construction of the AZ-301 Condensate Return System and Pit Upgrades.

Due: 3-31-06 for complete construction for the AP-106A Central Pump Pit Upgrade.

Status: Unrecoverable due to work and resource constraints. Change packages are in development.

Accomplishments: All of the M-48-14 in-tank video activities have been completed. The internal reports have been completed.

Planned Actions: Activities to be completed on tank integrity are captured in a matrix of work to be done. Ecology noted that we are not tracking stabilization modernization of equipment and that should be included.

Issues: Ecology noted that we state "No Issues" on a milestone that is unrecoverable; this should be explained.

In Tank Characterization and Summary

One grab sample was taken from each tank. The cross-site transfer will be completed in the next 2-3 months. The samples were taken on 2-15, so it will be 30-45 days before results are received.

DQO preparation: The draft SST Closure DQO was submitted for review 2-7-06; it is anticipated we will get this back in March. The Tank Emissions DQO is used to sample vapors in C-103. There have been some studies done at PNNL on corrosion coupons in

SST, or grouping SSTs into less structurally sound or more structurally sound. We know there is a summary of knowledge that is out there on corrosion of SSTs.

ACTION: Develop a briefing to determine knowledge level.

M-90-00, Complete Acquisition of New Facilities, Modifications of Existing Facilities, and/or Modifications of Planned Facilities, as Necessary for Storage of Hanford Site Immobilized High Level Waste (IHLW), Immobilized Low Activity Waste (ILAQ), and Disposal of ILAW, and M-20-00, Submit Part B Permit Applications.

Accomplishments: Testing was done and major leaks attributable to weather. An NCR was initiated and a recovery plan for abandoning secondary liners and using primary liners is expected to be completed by 3-20-06. NOD workshops were held with Ecology; comments were dispositioned and sent back.

Planned Actions:

- The air permit will be completed.
- The Construction QA Report will be done in March.
- The Mitigation Action Plan and a transmittal letter has been prepared for disturbance of land and replanting. The letter reflects input from the Environmental Resource Work Group. There is a tight window now as the sagebrush seeds need to be provided to the nursery before 3-7.
- IDF construction is now scheduled for April.
- A generic description of the Risk Budget Tool concepts was provided to Ecology. Although we still cannot provide actual data, Ecology needs to be comfortable with the risk assessment that leads to it.
- It was anticipated that the RCRA Part B would be out but expect it to be final on 3-10.
- Low-activity waste Federal Review Group (LFRG) review is expected to be completed in March.

Working internally to identify differences in data sets and assumptions between IDF PA and EIS .

The source of delay for releasing the PAs to Ecology, EPA, etc. is a difference of opinion on the calculations. We hope to get this issue resolved in the next few days. We recently sent an interagency agreement to support review of the PAs to EPA. We also need to determine how to staff these activities.

Issues: Efforts to get the PAs released as a public document would be of great benefit to Ecology. We need to come to some sort of agreement internally before we go forward to ensure nothing in the documents could cause an inappropriate assumption. Also, the NRC won't look at draft documents. The PAs have not been able to be released as we have not received approval from HQ. Hopefully we will come to a conclusion in the next week or two. Ecology stated that holding release of the PAs until after the EIS is approved creates a problem with the permit.

M-26-010, Calendar Year 2004 LDR Report, Table 3-4, Schedule for ORP Assessments for CYs 2005 through 2006. The last assessment report was identified in the annual LDR report, which was submitted to Ecology on 2-17-06; this will close out this milestone.

Waste Treatment and Immobilization Plant (WTP) Project

ORP provided a handout of the WTP progress and estimate at completion. It is anticipated that the total cost will go from \$5,781M to \$10,937M and the estimated completion date from July 2011 to May 2017, or beyond. Key reasons for the increase, what worked, what didn't work, and lessons learned were addressed in the handout.

Key Reasons for Increase: Regulatory changes, technology issues, changes in labor and equipment costs, lower than expected productivity, reduced funding levels that extended the schedule, and increasing contingency to adequately address risk assessment were cited as major reasons for the increase in cost and schedule. The increase in seismic criteria and fireproofing requirements, as well as hydrogen mitigation, attributed to the regulatory and technological changes. The budget for FY 2006 was anticipated to be \$626M but in reality was only \$490M; which delayed work planned.

What Worked: Developed an active Research and Technology Program that ensures a robust and flexible plant. Developed a second resin source that is far superior to the baseline resin. System optimization between WTP and Tank Farms. Note that we still don't understand the capacity of the plant, although it is intended to be the right size for pre-treatment.

What Didn't Work: Engineering and construction were too closely coupled. Contingency calculation methodology underestimated the impacts of such a large project. Industry expert reviews should have been conducted earlier.

Lessons Learned: Baselines for very large complex technical projects should be established on at least 60% design. Project management strategy should be in place prior to establishing commitments. Contracts should include DOE Order 413.3 from the outset.

ORP has completed the first bottom's up estimate in December 2005. A cost and schedule validation review was conducted that increased reporting requirements.

ACTION: Provide Ecology a copy of the After Action Fact Finding Review report.

ORP is looking at the cost and schedule base and flow sheet. A draft report on how much work was planned, how much work was done and how much it cost should be published today.

ACTION: Provide Ecology a copy of the cost and schedule report.

There is one fatal flaw that would prevent WTP from operating – line plugging. There are also 17 major issues and 13 potential issues that would prevent the WTP from meeting contract capabilities. Off-project staff are being brought in to get to the bottom of these issues and prepare a detailed report. ORP will develop a 20-25 page summary that is releasable to the public.

ACTION: Ecology would like to see a copy of the detailed Functionality Expert Review Report, not just the summary portion.

There will not be anyone that participated in the original design involved in resolving these issues. The person in charge of this review team will report to Bechtel Corporate Engineering Manager. Bechtel is responsible for design and engineering of the plant.

Key deliverables: Updated EAC will include the \$490M funding level. Will develop a contract strategy with DOE. Will have to renegotiate most if not all TPA milestones. Would like to have a signed contract by the end of this year.

M-62-08, Submittal of Hanford Tank Waste Supplemental Treatment Technologies Report. When the project is scaled up, all the technicium in the center of the box will not be available. A batch is what comes out of the mixer dryer; a box takes 8 batches of waste. We will fill the box up with waste (2 batches) and add the remaining batches to it as it is melting. The final or 9th batch will be clean soil. Once cooled the any remaining head space in the box will be filled with soil. For disposal in IDF, there cannot be any head space.

Full Scale Test 38-B. Have conducted some tests with very little metal coming out. We did find a zirconium layer in the bottom. 38-A1 did not have an oxidizer. We add zirconium and boron as glass formers to make a better glass. As you may recall, 38-A1 did not contain an oxidizer. We need to confirm that the amount of oxidizing constituents produces glass with very little metal in it. Will put out a report on the results of the cooling.

Cost and schedule. The projects have had significant delays. We are concerned about the schedule stretching out to FY 08. Variances in baseline for FY 06 – have \$23M covering completion of design and Critical Decisions 2 and 3. The range of \$180-\$250 M is for life cycle treating of S-109 waste, including D&D. Near term deliverables for the next few months is completing design and finalizing costs. Have submitted NOCs for the test facility, but as the design changes we will have to re-submit. BV appears to be a good supplemental treatment process to ensure long-term success. It can handle 40 times higher activity than WTP can. There should be the same kind of rigor built into this process as that of WTP.

Tri-Party Agreement Major Milestone Management Review
February 28, 2006

<u>Name</u>	<u>Organization</u>	<u>Mail Stop</u>	<u>Attachments</u> <u>Yes/No</u>
R.P. / PBR	FH		✓
Woody Russell	DOE-ORP		✓
Ron Skinnarland	Ecology		✓
Melinda J Brown	Ecy		✓
Lori HUFFMAN	ORP		N
CATHERINE LOUIE	ORP		Y
RON MORRISON	FM/TPA	H8-12	Y
Jeff Lyen	Ecy		Y
Dave Bartus	EPA		
Andy Stevens	ORP		N
Nick Ceto	EPA		
JOE CAGGIANO	ECOLOGICAL		N
W.S. Lion	ORP	H6-60	N
Mike Burns	Ecology		N
Kris Colosi	CH2M Hill	ST-67	
Frank Anderson	CH2M Hill		
Phil LaMont	ORP	H6-60	N
Brenda Jantz	Ecy		NO
BRUCE NICOLL	DOE-ORP	H6-60	No
Lina Pacheco	DOE-ORP	H6-60	N
Pete FORTNEY	ORP	H6-60	N
Billie Mauss	ORP	H6-60	N
Steve Chalk	RL		N
Sonya Moore	FH	?	Y

Sign In Sheet

ORP TPA – Quarterly Milestone Review

February 28, 2006 – Ecology Offices, 3100 Port of Benton

[illegible]

Office of River Protection

Tri-Party Agreement Quarterly Milestone Review February 28, 2006



U.S. Department of Energy
U.S. Environmental Protection Agency
Washington State Department of Ecology

1st Quarter of FY 2006
Addendum

Analytical Laboratory (LAB)

The Radiochemical LAB will incorporate features and capabilities necessary to ensure efficient WTP operations including: (1) receipt/handling of Hanford Tank Farm samples for waste feed acceptance; (2) process control; (3) waste form qualification testing; (4) environmental and authorization basis compliance; and (5) limited technology testing. To mitigate technical risks and for cost advantages, the LAB will outsource low level and non-radioactive (environmental) samples. Facility construction started on July 2003 with the BNI December EAC showing a projected completion date of January 2012. Due to the migration in execution, performance is assessed against the interim baseline defined by the December 2005 EAC. As of January 2005, engineering was 84% complete and construction was 26.7% complete.

Basemat pours are currently on hold pending Washington State Department of Ecology's (WDOE's) concurrence on non-conformance report (NCR) and construction deficiency reports (CDRs) issued address potential non-compliance with ASME B31.3, Paragraph 341.7, *In-Process Examination* requirements. Specifically, examination of coaxial pipe jacket clamshell welds for piping systems regulated under the Dangerous Waste Permit. On October 20, 2005, BNI dispositioned the subject NCR and CDRs as "use-as-is," determining full code compliance based upon code interpretation. In an effort to resolve disagreements on code interpretation and determine the effectiveness of the in-process examinations performed, WDOE requested 5% of the welds in question be subjected to Ultrasonic inspections. For 12 of the 32 field welds examined, UT inspections identified slag inclusions greater than the 0.25" allowed by code. In light of the UT inspection results, ORP has concluded in-process inspections are not an effective tool for ensuring quality of Dangerous Waste Permitted piping. As a result BNI has discontinued wide-scale use of this inspection process and is conducting a technical evaluation of margin (the actual pressure and moment stresses against code allowable). In addition, for completed vendor/shop clamshell welds BNI is in the process of identifying a recommended population to be inspected through a non-destructive examination (NDE) method. Results of the NDE data and technical evaluations are intended to bound a fit for function disposition for completed field and vendor welds.

Engineering received and turned around 50 vendor shop drawings for fabrication of LAB structural steel. The first priority steel is forecast to be received-on-site April 2006 in support of initial installation May 2006.

Construction forces continue installation of wall embeds and encast liners for placements 20B and 2C, installation of wall steel and slab dowels for placement 20D, drain pipe fit-up/welding on leak detection boxes for C2 and C3 vaults, preparation for formwork for placements 20A and 20B, installation of pipe sleeves/embeds for C2 and C3 vaults and fit and installation of pipe in the C3 vault.

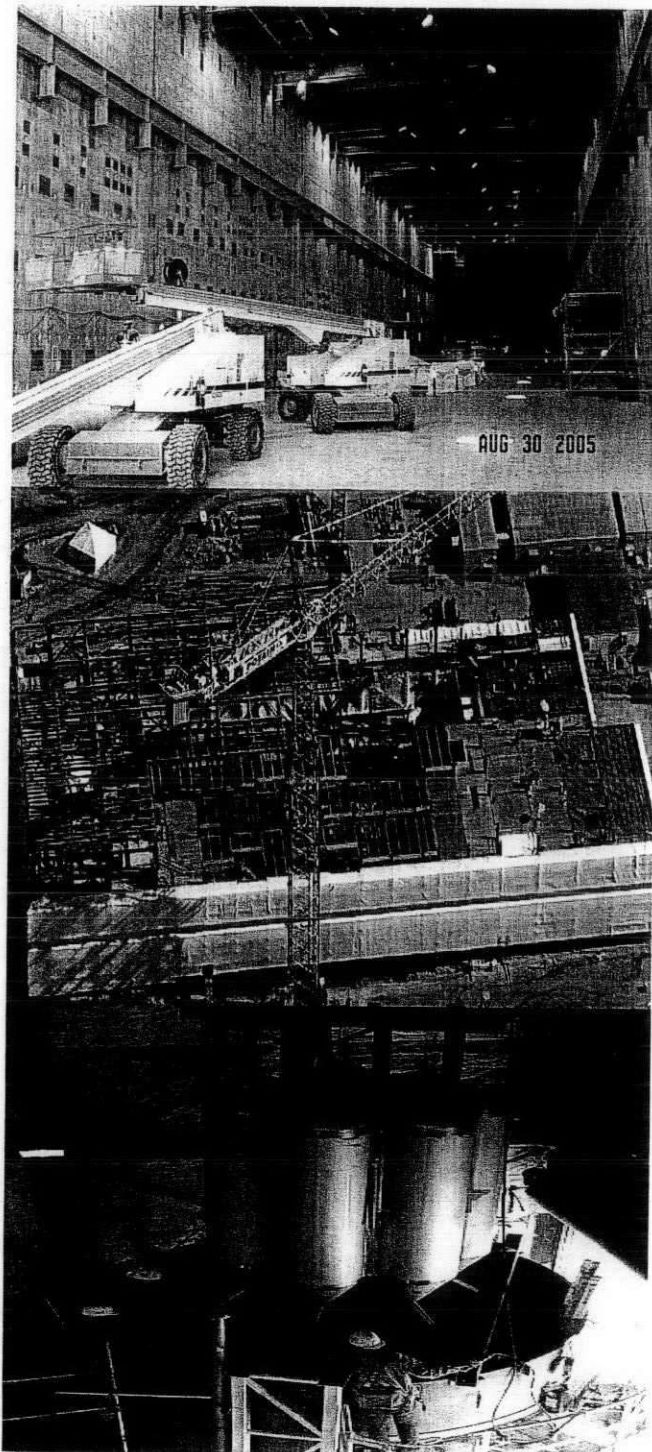
Balance of Facilities (BOF)

The BOF sub-project provides essential site services to all production and service facilities at the WTP. BOF includes multiple facilities of varying sizes that will provide such items as electrical power, roads, security, water, steam, glass former storage, chemical treatment, and air systems. Facility construction began in November 2002 with the BNI December EAC showing a projected completion date of June 2012. As of December 2005 engineering is 81% complete and construction is 44% complete based on quantities installed.

State of Washington Department of Ecology approval of Dangerous Waste Permit packages BOF-07 and BOF-08 for installation of the Liquid Effluent Retention Facility (LERF) Lines was obtained. Independent weld inspections of the compressed air distribution piping for four of the five dryers for the Chiller Compressor Plant (CCP) are complete. Inspections were done against the following three standards/requirements: (1) the fabricators standard, Henderson; (2) ASME B31.3, *Process Piping*, type Category D fluids; and (3) ASME B31.3 normal fluids. Inspection results identified a 45% to 70 % failure rate based upon the above standards. Based upon the inspection results, assumed to be representative, BNI has issue a letter to the vendor rejecting their completed products. BNI plans to resolve the commercial impacts prior to moving forward with necessary fixes.

Construction forces completed erection of the Water Treatment Building (WTB) and continue with pre-fabrication and installation of silencer pipe at the Chiller Compressor Plant (CCP), erection of the CCP frame, alignment and fit up and welding for radiological transfer lines in Trench 4X, excavation for the 2" plant service air line repair and grounding installation for the Cooling Tower, assembly and installation of structural steel at the CCP, installation of WTB HVAC unit and ductwork and punch list items and supported HLW/PT demobilization efforts.

ORP is in the process of conducting an oversight assessment of BOF equipment, system and facility lay-up and turnover. The assessment is scheduled to complete March 2006.



U.S. Department of Energy
Office of River Protection



*WTP Progress
and Estimate at Completion
TPA Quarterly Milestone Review*

February 28, 2006

*John R. Eschenberg
WTP Project Manager*



LAW, BOF, and LAB Construction is Moving Forward

Accomplishments Planned for FY 2006

- ☐ Low-Activity Waste Facility
 - Start installing siding, March 2006
 - Complete +48' concrete placements, April 2006
 - Complete enclosure of main building (installation of siding and roofing), November 2006
- ☐ Analytical Laboratory
 - Complete concrete and steel design, May 2006
 - Complete architectural Design, July 2006
 - Complete concrete placements for hotcells, June 2006
- ☐ Balance of Facilities
 - Install and test underground pipe, September 2006
 - Erect Chiller Compressor Plant building and install HVAC, June 2006
 - Complete concrete pads for GFSF bins and silos, July 2006



WTP Estimate at Completion

- ❑ BNI Prepared Waste Treatment Plant Estimate at Completion (EAC) Executive Summary released February 7, 2006

	March 2003 Baseline	December 2005 EAC
Estimated Cost (\$'s in millions)	Facility Costs \$ 4,856 Management Reserve \$ 550 Forecast at Completion \$ 5,406 TPRA* \$ 100 Estimated Fee \$ 225 CHG Transition \$ 50 Total Project Cost \$ 5,781	Facility Costs \$ 7,736 Management Reserve \$ 1,041 Forecast at Completion \$ 8,777 TPRA* \$ 1,760 Estimated Fee \$ 350 CHG Transition \$ 50 Total Project Cost \$10,937
Estimated Completion Date	July 2011	May 2017
% Design Complete	40%	68%

*Technical and Programmatic Risk Assessment



Key Reasons for Increase

- ❑ Regulatory changes, including a 38% increase in seismic criteria and increased fireproofing requirements
- ❑ Resolving technology issues, including pulse-jet mixers and hydrogen mitigation
- ❑ Changes in labor rates and plant equipment and material pricing
- ❑ Changes in material quantities, based on the evolution of plant design
- ❑ Lower than expected engineering and construction productivity
- ❑ Reduced project funding levels that extended the schedule
- ❑ Revised comprehensive risk assessment, resulting in an increase in the management reserve (contingency) to cover scope uncertainties



What Could Have Been Done Better

- ☐ Engineering and construction too closely coupled
- ☐ More critical review of baseline quantity/unit install rate estimates
- ☐ Very large projects contingency calculation methodology underestimated impacts of:
 - Programmatic risk
 - World economic impacts
 - Under-appreciation of escalation/inflation rates
 - Traditional EPC risks
 - Technical risks inherent in first-of-a-kind nuclear/chemical plant
- ☐ Seismic design criteria should be more directly applicable to the facility siting
- ☐ Industry expert reviews done sooner



What has Worked

- ❑ Right-sized plant – can complete the mission without “gold-plating”
- ❑ Well established relationship with State regulators
 - Phased permitting approach
 - Support for milestone changes based on technical/operational restrictions
- ❑ Active Research and Technology Program to further reduce risks
 - Ensures a robust and flexible plant
 - Developed backup unit operations
 - Evaluated various processing options/sequences
 - Increased plant throughputs and capacities
- ❑ System optimization between WTP and Tank Farms



Lessons Learned

- ❑ Baselines for very large complex technical projects should be established on at least 60% design
 - R&D complete/technical risk low
 - Reliable quantity/unit rate information
 - Sufficient time between engineering and construction
 - Cost and schedule contingency based on project maturity and technical risk – assumptions understood and agreed to
- ❑ Project management strategy should be in place prior to establishing commitments
- ❑ Establish strong, competent DOE organization (engineering, Federal Project Directors, etc.) early in the Project design phase
- ❑ Certified Earned Value Management System should be included in Project management/control strategy
- ❑ Contracts should include DOE Order 413.3 from the outset



Resorting Confidence and Credibility

- ☐ Secretary's Direction
- ☐ Bottoms up Estimate at Completion
- ☐ More rigorous reporting
- ☐ Comprehensive validation review
- ☐ EM Office of project recovery established
- ☐ After Action Fact Finding Review
- ☐ Industry Expert Reviews



Industry Expert Reviews Path Forward

- ❑ ORP required BNI to conduct reviews of the functionality of WTP process systems and the EAC utilizing the industry's most qualified people
- ❑ Team members are comprised of approximately 50 experts from government and commercial backgrounds, including BNI competitors
- ❑ ORP has received the draft functionality of the WTP process systems report
- ❑ The EAC team is on schedule to submit its final report March 31, 2006



WTP Functionality Expert Review Results

- ❑ One fatal flaw which would prevent WTP from operating – line plugging

- ❑ **Seventeen major Issues that would prevent the WTP from meeting contract capabilities**
 - Inconsistent long-term mission focus
 - Plugging in process piping
 - Mixing vessel erosion
 - Inadequate design of mixing system
 - Design for commissioning waste vs. mission
 - Must have feed pre-qualification capability
 - Process limits not completely defined
 - Loss of the WTP expertise base
 - Limited remotability demonstration
 - Lack of comprehensive feed testing in commissioning
 - Critical equipment purchases
 - Ultrafilter area and flux
 - Undemonstrated leaching processes
 - Baseline ion exchange resin stability
 - Availability operability, and maintainability
 - Mis-batching of melter feed
 - Film cooler and transition line plugging

- ❑ **Thirteen potential issues that would prevent the WTP from meeting contract capabilities**
 - Evaporator jumper replacement and gasket material
 - Evaporator decontamination factor
 - Evaporator capacity
 - Evaporator control
 - Ultrafiltration and leaching gelation and precipitation
 - Ion exchange with inadequate process development
 - Ion exchange column design
 - Ion exchange cross-contamination control
 - Ion exchange complexity of valving
 - Ion exchange effectiveness of cesium-137 breakthrough monitoring system
 - LAW vitrification lack of spare bubbler material
 - Analytical Lab and sampling using undemonstrated sampling system
 - BOF with lack of glass former chemical analysis before unloading into silos

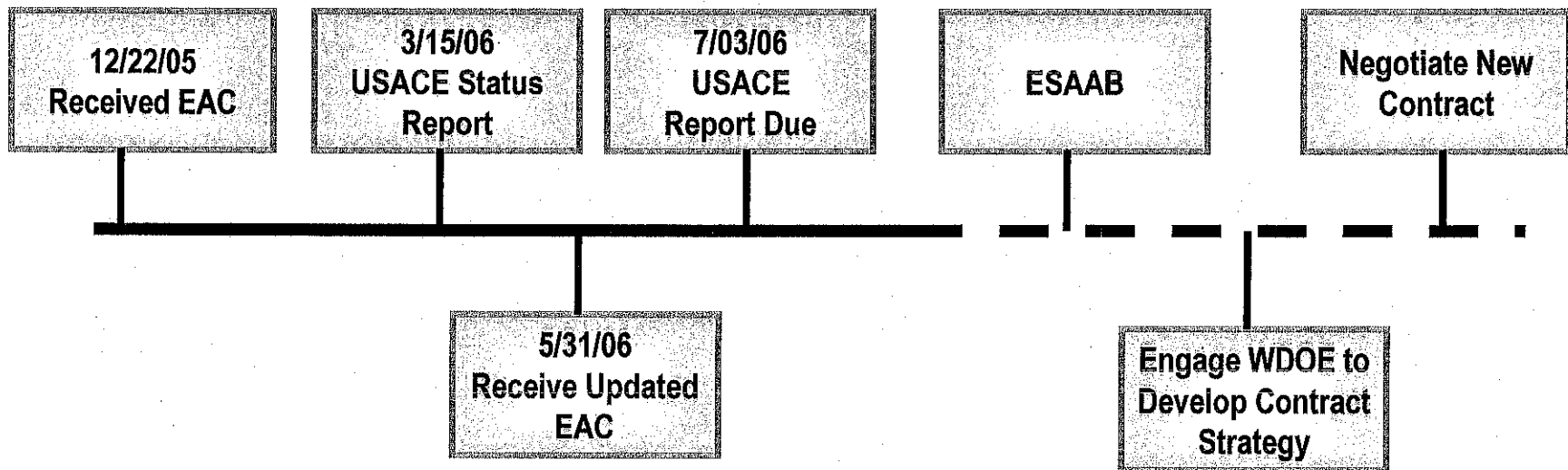


Recent Events Affecting the December 2005 EAC

- ☐ Current fiscal year funding of \$490 million rather than the planned \$626 million
- ☐ New requirement to separate cost accounts for the project's five primary facilities as mandated by Congress
- ☐ Recommendations from two external review teams that are examining the project's cost, schedule and technical baselines.
- ☐ The revised EAC, based on the above events, will be delivered to DOE the end of May



ORP Path Forward to Develop New Project Baseline



Office of River Protection

Tri-Party Agreement
Quarterly Milestone Review
February 28, 2006



Office of River Protection

U.S. Department of Energy
U.S. Environmental Protection Agency
Washington State Department of Ecology

1st Quarter of FY 2006

Agenda

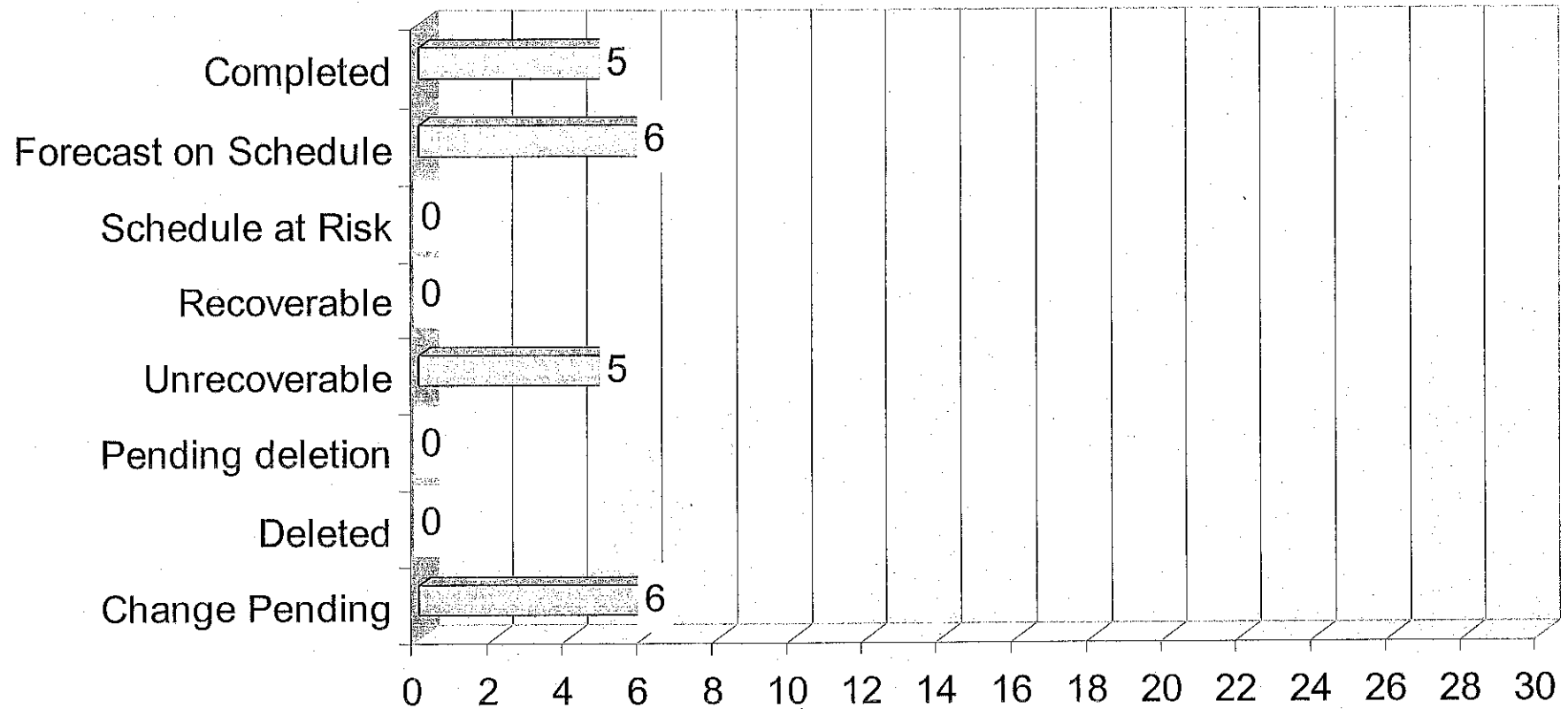
Office of River Protection
Tri-Party Agreement
Quarterly Milestone Review Meeting
Ecology Offices, 3100 Port of Benton
February 28, 2006
9:00 a.m. – 12:00 p.m.

Page	Topic	Leads	Time
3 9	• TPA Milestone Statistics • FY 2005 ORP TPA Cost & Schedule Performance (CHG)	Woody Russell / Suzanne Dahl / Jeff Lyon	9:00
40	M-45-00, Complete Closure of All Single-Shell Tank Farms	Roger Quintero / Jeff Lyon	9:10
48	M-46-00, Double-Shell Tank Space Evaluation	Cathy Louie / Jeff Lyon	9:20
50	M-47-00, Tank Waste Treatment, Storage and Disposal Facilities	Cathy Louie / Les Fort	9:30
52	M-45, -50, -60 Single-Shell Tank Corrective Action	Bob Lober / Joe Caggiano	9:40
54	M-23-00, Tank Integrity and Monitoring	John Long / Jeff Lyon	9:50
55	Interim Stabilization Consent Decree	John Long / Nancy Uziemblo	10:00
56	M-48-00, DST Integrity Assessment Program	Andy Stevens / Vic Callahan / Brenda Jentzen	10:10
58	In Tank Characterization and Summary	Wen-Shou Liou / Michael Barnes	10:20
	BREAK		
59	M-90-00, Complete Acquisition of Facilities for Interim Storage of IHLW and Storage/ Disposal of ILAW and M-20, Part B Permits	Phil LaMont / Bud Derrick	10:30
61	M-26-010, Calendar Year 2004 Land Disposal Restrictions Report, Table 3-4, Schedule for ORP Assessments for CYs 2005 through 2006	Woody Russell / Jeff Lyon	10:40
62	• BNI Cost & Schedule Performance and • M-62-00, Complete Pretreatment Processing and Vitrification of Tank Wastes/Supplemental Technologies	Bruce Nicoll / Pete Furlong / Lina Pacheco / Bobby Williams / Billie Mauss / Suzanne Dahl	10:50

TPA Milestone Statistics
 (Including target milestones)

Milestone	Due Date	Total Active as of 01/31/06	Milestone Number	Due Date	Milestone Number	Due Date
M-20-00, Submit Part B Permit Application on Closure/Post Closure Plans for all RCRA TSD Units	02/28/04 (M-20-00)	0				
M-23-25, Tank Integrity and Monitoring	03/31/05 (M-23-25)	0				
M-23-27, Complete 244-CR Liquid Level Assessment	12/30/04	0				
M-42-00, Provide Additional DST Capacity	TBD	1	M-42-00	TBD		
M-43-00, Complete Tank Farm Upgrades	06/30/05 (M-43-00)	0				
M-45-00, Complete Closure of all SST Farms	09/30/24 (M-45-00)	31	M-45-00 M-45-00B M-45-00C M-45-00D M-45-02 M-45-02M M-45-02N M-45-02O M-45-05 M-45-05A M-45-05-T05 M-45-05-T06 M-45-05-T07 M-45-05-T08 M-45-05-T09 M-45-05-T10 M-45-05-T11	09/30/24 09/30/06 09/30/06 01/31/08 TBD 03/01/06 03/01/08 03/01/10 09/30/18 03/31/07 09/30/07 09/30/08 09/30/09 09/30/10 09/30/11 09/30/12 09/30/13	M-45-05-T12 M-45-05-T13 M-45-05-T14 M-45-05-T15 M-45-06 M-45-06-T03 M-45-06-T04 M-45-13 M-45-15 M-45-55 M-45-56 M-45-58 M-45-59 M-45-60	09/30/14 09/30/15 09/30/16 09/30/17 09/30/24 03/31/12 03/31/14 12/31/07 12/31/07 01/31/07 TBD 06/30/07 TBD 09/30/07
M-46-00, Double Shell Tank Space Evaluation	11/30/06 (M-46-01)	0				
M-47-00, Complete All Work for Phase 1 Operations	02/28/18 (M-47-00)	5	M-47-00 M-47-02 M-47-03A	02/28/18 03/31/09 03/31/09	M-47-04 M-47-06	03/31/09 06/30/10
M-50-00, Complete Pretreatment Processing of Hanford Tank Waste	12/31/28 (M-50-00)	1	M-50-00	12/31/28		
M-51-00, Complete Vitrification of Hanford High Level Tank Waste	12/31/28 (M-51-00)	1	M-51-00	12/31/28		
M-61-00* (alternate path), Complete Pretreatment & Immobilization of Hanford Low Activity Tank Waste	12/31/28 (M-61-00)	1	M-61-00	12/31/28		
M-62-00, Complete Pretreatment Processing and Vitrification of Tank Wastes	12/31/28 (M-62-00)	9	M-62-00 M-62-00A M-62-01M M-62-03	12/31/28 02/28/18 07/31/06 12/31/06	M-62-07B M-62-08 M-62-09 M-62-10 M-62-11	12/31/07 06/30/06 02/28/09 01/31/11 06/30/07
M-90-00, Interim Storage and Disposal of LAW and Interim Storage of HLW	TBD (M-90-00)	3	M-90-00 M-90-10 M-90-11	TBD 08/31/08 08/31/10		
M-48-00, DST Integrity Program, Submit Results of 4 DSTs not Previously Examined	09/30/07	4	M-48-00 M-48-14 M-48-15	09/30/07 03/31/06 09/30/07	M-48-07A	06/30/06
Interim Stabilization Consent Decree	09/30/04 (D-001-00)	1	D-001-00			
Total Active Milestones:		57				

FY 2006 MILESTONE PERFORMANCE



Fiscal Year 2006 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk					
D-001-00-R26	DOE Shall, On A Quarterly Basis, Submit To Ecology A Written Report Documenting Tank Stabilization Activities That Occurred During The Period Covered By The Report. This Written Report Shall Provide The Status Of Progress Made During The Reporting Period.	10/31/05	X 10/31/05							
M-048-07A-A	Complete construction of the AZ-301 condensate return system and remove the AZ-151 catch tank system from service by October 31, 2005. This scheduled deliverable is a subset of M-48-07A, and thus labeled as M-48-07A-A.	10/31/05	X 10/31/05							
M-046-21	Complete Implementation Of Double Shell Tank Space Optimization Study Recommendations (Tank Space Options Report Document No. RPP-7702, April 12, 2001).	12/31/05	X 12/15/05							
M-062-01L	Submit Semi-Annual Project Compliance Report	1/31/06	X 01/31/06							
M-045-02M	Submit biennial update to SST retrieval sequence document (agreement Appendix I, Section 2.1.2), double shell tank space evaluation document and Ecology concurrence of additional tank acquisition.	3/1/06					X			X
M-048-07A-B	Completion of construction for the 241-AP-106A central pump pit upgrade (remove existing equipment, evaluate pit integrity, and replace pit coating, if necessary. This scheduled deliverable is a subset of M-48-07A, and thus labeled as M-48-07A-B	3/31/06					X			X

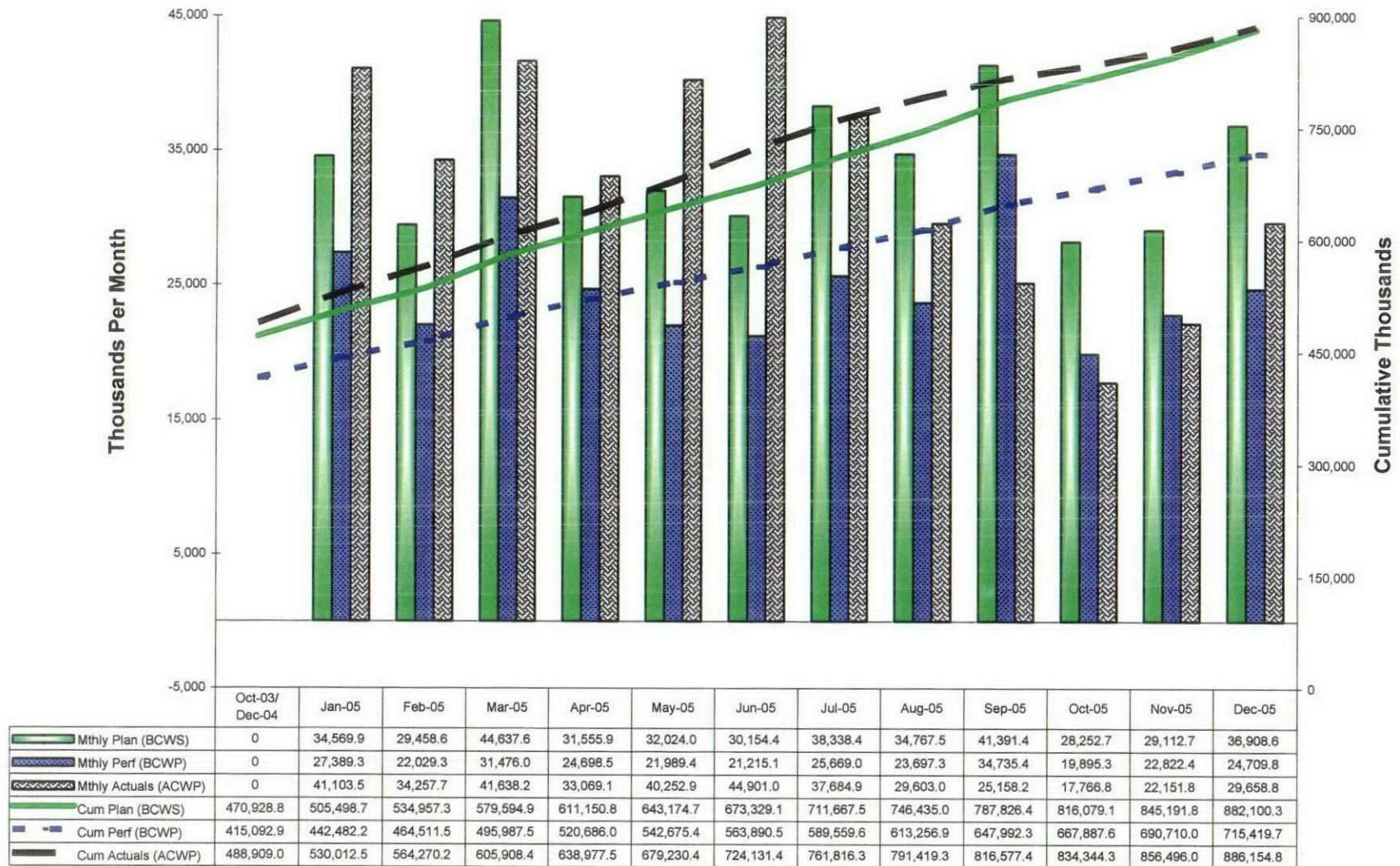
Fiscal Year 2006 Tri-Party Agreement Milestone Status										
Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk					
M-048-14	Submit Written Integrity Report For The Double-Shell Tank System	3/31/06		X						
M-047-05A	Complete startup and turnover activities for waste retrieval and mobilization systems for selected initial low-activity waste feed tank (other than AZ-101 or AZ-102).	4/30/06	X 02/21/05							
M-045-55-T04	Submit To Ecology For Review And Comment A Draft Field Investigation Report Combining The Results Of Field Investigations And Analysis For WMAs A-AX, C & U Pursuant To The Site-Specific SST WMA Phase 1 RFI/CMS Work Plan Addenda For WMA A-AX, C And U. As part of the Phase 2 Vadose Zone project renegotiations, being developed, this target milestone scope will be included in M-45-55 Phase 1 Rollup documentation due in 1/07. Project continues to complete field characterization activities per approved workplan, but will defer stand alone paper study for additional characterization during phase 1.	4/30/06								X
M-048-07A	Complete construction of the AZ-301 condensate return system and pit upgrades. This includes: 1) Complete construction of the AZ-301 condensate return system and remove the AZ-151 catch tank system from service [see M 45-07A-A]; 2) Complete construction of AP-106A Central Pump upgrade [M 48-07A-B]; and 3) complete construction of SY-B Valve Pit upgrade [see M 48-07A-C].	6/30/06		X						

Fiscal Year 2006 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk					
M-048-07A-C	Completion of construction for the 241-SY-B valve pit upgrade (remove existing equipment, evaluate pit integrity, and replace pit coating, if necessary). This scheduled deliverable is a subset of M-48-07A, and thus labeled as M-48-07A-C.	6/30/06		X						
M-048-07B	The Disposition of all Double-Shell Tank Transfer System Components that will not remain in use beyond June 30, 2005. Draft Change Request is being prepared requesting extension of completion date to February 2009 for the "low risk" components. It will be sent to Ecology in February 2006. Ecology has indicated the Change Request will not be approved, meaning the milestone will be missed.	06/30/06					X			X
M-062-08	Submittal Of Hanford Tank Waste Supplemental Treatment Technologies Report, Draft Hanford Tank Waste Treatment Baseline, And Draft Negotiations Agreement In Principle (AIP).	6/30/06					X			
M-045-56B	Ecology and DOE agree, at a minimum, to meet yearly (by July or as needed to support annual budgeting) for the specific purpose of assessing the adequacy of information, and the need for the establishment of additional agreement interim measures.	07/01/06		X						
M-062-01M	Submit Semi-Annual Project Compliance Report	07/31/06		X						

Fiscal Year 2006 Tri-Party Agreement Milestone Status										
Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk					
M-045-00B	Complete specified "near term" SST waste retrieval and interim closure activities, to result in the retrieval of all tank wastes in WMA-C SSTs pursuant to the agreement criteria in milestone M-45-00.	09/30/06					X			
M-045-00C	Initiate negotiation of SST waste retrieval and closure activities and associated schedules (for the period February 07 through August 08).	09/30/06		X						

CH2M HILL Performance Cost/Schedule (shown in thousands)
10/2003- 12/2005



Executive Summary

This executive summary pertains to the performance of the Tank Farm Contractor for the month of December 2005.

Tank Farm Vapor Solutions activities continued during the month with the meeting of the Exposure Assessment review group which reviewed and finalized the proposed Acceptable Occupational Exposure Limits (OELs) for more than 600 chemicals. Additional acceptable OELs will be finalized in January. Analysis is underway for additional proposed Chemicals of Potential Concern (COPC) in summa canister samples from A-Prefix Tank Farms. The analysis is being performed at Columbia Basin College, using High Resolution Mass Spectroscopy. Samples of the COPCs taken in C and AN Farms during the retrieval of Tank 241-C-103 are undergoing analysis. These samples likely represent bounding vapor conditions associated with waste disturbing activities. Operations teams were formed to define revisions to work processes, equipment, or training that will be required to implement changes to vapor controls in A-Prefix Tank Farms.

No iron was found deposited in the in-container vitrification (ICV) box sumps of the Demonstration Bulk Vitrification System (DBVS) (WBS 5.09.02.05) large-scale test 38B completed in November. Large-scale test 38C is under consideration to demonstrate repeatability of these favorable results and to implement corrective actions from test 38B ICV box positive pressure events. Discussions were held with the Defense Nuclear Facilities Safety Board (DNFSB) on multiple layers of protection as related to confinement of radioactive and chemically hazardous material. DBVS is proceeding with facility design including changes resulting from these discussions and recent Process Hazards and Operability Analysis sessions emphasizing protection of facility workers. Also, critical decision (CD)-0 and CD-1 packages are being prepared for transmittal to the U.S. Department of Energy-Headquarters (DOE-HQ) in February 2006.

Activities continued on the Integrated Disposal Facility (IDF) (WBS 5.09.03.01) with issuance of the Draft Criticality Evaluation Report, initiation of the Leachate Tank Liner installation, and initiation of erection of the Crest pad and Leachate Transfer Buildings.

Single-shell tank (SST) waste retrieval activities continued during the month. Approximately 12% of the waste has been retrieved from Tank 241-C-103 (WBS 5.08.06.06.03) and transferred to receiver Tank 241-AN-106. Further retrieval activities have been delayed due to failure of the slurry pump assembly. Retrieval of waste continued from Tank 241-C-201 (WBS 5.08.06.06.13) with approximately 72% of the waste retrieved as of December 5th. Equipment problems that surfaced in December were resolved allowing retrieval operations to resume in January. The first phase of the Remote Water Lance (RWL) Rapid Demonstration in Tank 241-S-112 (WBS 5.08.07.01.12) has been completed. The first phase of the demonstration resulted in break-up of 80% of the hard heel waste and assisted in the retrieval of 30% of the remaining waste from the tank. The next phase of the demonstration will continue the task of breaking up waste and assisting in the solids retrieval. Retrieval of Tank 241-S-102 (WBS 5.08.07.01.02) remains at approximately 248,000 gallons (54%) retrieved as of the end of December and is currently on standby, ready to operate when resources are available, and double-shell tank (DST) space constraints are resolved.

Executive Summary (cont.)

CH2M HILL Hanford Group, Inc. (CH2M HILL) completed the 244-CR Vault and 244-A Lift Station exhaust system isolation as part of the Federal Facility Compliance Agreement (FFCA) milestone (WBS 5.07.02.09). This completed CH2M HILL and the U.S. Department of Energy, Office of River Protection's (ORP) commitments under the FFCA to either upgrade exhaust system sample systems or remove the exhaust system from service.

Preparations continued for the start of the High Resolution Resistivity Leak Detection and Monitoring (HRR-LDMM) injection test in January (WBS 5.08.05.04.01). The test is in support of Tri-Party Agreement Milestone M-45-00B, and its purpose is to determine whether this could be a primary leak detection method for future sluiced retrievals, indicate response time to identify leaks, and provide data to equate resistivity change with leak rate.

The first draft of the Life Cycle Baseline Change Request was reviewed with the ORP during December. Detailed reviews between the ORP and CH2M HILL are planned in January in support of a planned external independent review during March/April time frame.

The earned value fiscal-year-to-date (FYTD) performance data for the Interim Baseline reflects a negligible unfavorable schedule variance (SV) of \$0.5M and a favorable cost variance (CV) of \$7M. This favorable CV is due to efficiencies generated in base operations and business services and lagging costs and/or progress in some level-of-effort accounts within the 222-S Laboratory, Closure Operations Surveillance and Maintenance, Project Delivery, Tank Farm Programs, and Waste Feed Operations.

The approved baseline reflects a program-to-date unfavorable SV of \$167M; and a program-to-date unfavorable CV of \$171M. The program-to-date SV is because of delays in SST retrievals due to vapor and tank waste technical issues; continued delay in approval of the National Environmental Policy Act of 1969 (NEPA) documentation, impacting the Transuranic waste (TRU) Project; DBVS delays as the project matured from the initial concept to a more robust facility; tank closure delays due to schedule extension for completion of the Tank Closure Environmental Impact Statement (EIS) and Record of Decision (ROD); delays in Projects W-314 and E-525 due to vapor and technical issues; and deferral of three retrieval systems on Project W-211. The unfavorable program-to-date CV is due to higher than planned retrieval and closure design costs, longer retrieval periods due to waste physical characteristics, unbudgeted costs for vapor mitigation activities, and higher than planned costs on the DBVS, including costs related to Engineering Scale (ES) Test 13, the off-gas system, the Tank 241-S-109 Functions and Requirements (F&R) document, and partial retrieval of Tank 241-S-109 test waste. Also, Projects W-314 and E-525 incurred additional field construction costs due to vapor mitigation activities and unexpected as-found conditions.

CH2M HILL Hanford Group, Inc.
CUMULATIVE PERFORMANCE MEASUREMENT - DECEMBER 2005
BY WORK BREAKDOWN STRUCTURE

Dollars in Thousands

WBS	TITLE	Cumulative Program-To-Date							
		Budgeted Cost		Actual Cost Work Performed	Variance				Budget at Completion (BAC) *
		Work Scheduled	Work Performed		Schedule	SV %	Cost	CV %	
5.07	BASE OPERATIONS - Excluding 5.07.02	296,971.5	288,022.8	304,959.3	(8,948.7)	-3.0%	(16,936.5)	-5.9%	412,143.3
5.07.02	Env/TPA Milestone Achievement	65,045.5	54,997.2	44,718.3	(10,048.3)	-15.4%	10,278.9	18.7%	87,507.7
	TOTAL BASE OPERATIONS	362,017.0	343,020.0	349,677.6	(18,997.0)	-5.2%	(6,657.6)	-1.9%	499,651.0
5.08	RETRIEVE AND CLOSE - Excluding foll. WBS elements	9,074.9	9,044.8	8,410.1	(30.1)	-0.3%	634.7	7.0%	9,250.1
5.08.02	WTP Feed Delivery Program	23,491.1	23,485.8	32,069.1	(5.3)	0.0%	(8,583.3)	-36.5%	30,347.0
5.08.03.02	10 DST Retrieval Systems (W-211)	31,409.5	18,976.2	19,878.1	(12,433.3)	-39.6%	(901.9)	-4.8%	48,558.3
5.08.04.01	Tank Farm Restoration and Safe Operations (W-314)	34,767.7	31,633.7	38,982.9	(3,134.0)	-9.0%	(7,349.2)	-23.2%	34,767.7
5.08.04.02	Upgrade Transfer System (E-525)	14,787.1	12,125.7	24,646.8	(2,661.4)	-18.0%	(12,521.1)	-103.3%	15,489.5
5.08.05	Retrieval / Closure Program	100,145.0	89,735.9	109,160.9	(10,409.1)	-10.4%	(19,425.0)	-21.6%	133,490.1
5.08.06/7	SST Retrieval East / West Area	109,410.5	39,932.5	121,275.3	(69,478.0)	-63.5%	(81,342.8)	-203.7%	163,162.3
5.08.12/13	SST Closure	20,741.2	6,887.2	10,377.8	(13,854.0)	-66.8%	(3,490.6)	-50.7%	38,672.5
	TOTAL RETRIEVE AND CLOSE	343,827.0	231,821.8	364,801.0	(112,005.2)	-32.6%	(132,979.2)	-57.4%	473,737.5
5.09	TREAT AND DISPOSE WASTE - Excl. foll. WBS Elements	24,695.0	21,878.3	15,681.2	(2,816.7)	-11.4%	6,197.1	28.3%	34,583.9
5.09.02.02	TRU / LLW Packaging	28,623.2	11,975.4	19,841.7	(16,647.8)	-58.2%	(7,866.3)	-65.7%	40,832.6
5.09.02.03	LAW Treatment	39,478.9	26,100.9	68,279.1	(13,378.0)	-33.9%	(42,178.2)	-161.6%	48,078.7
5.09.03.01	Integrated Disposal Facility	28,659.2	28,992.6	18,227.2	333.4	1.2%	10,765.4	37.1%	31,899.8
5.09.03.04	Initial IHLW Storage Facility (W-464)	5,802.6	4,653.7	2,648.5	(1,148.9)	-19.8%	2,005.2	43.1%	12,459.3
	TOTAL TREAT AND DISPOSE WASTE	127,258.9	93,600.9	124,677.7	(33,658.0)	-26.4%	(31,076.8)	-33.2%	167,854.3
5.10	ANALYTICAL/TECHNICAL SERVICES	48,997.4	46,977.0	46,998.5	(2,020.4)	-4.1%	(21.5)	0.0%	66,526.1
RPP TOTAL		882,100.3	715,419.7	886,154.8	(166,680.6)	-18.9%	(170,735.1)	-23.9%	1,207,769.0

* BAC on this chart and in succeeding Cumulative Performance tables is for the period FY 2004 - FY 2006.

CUMULATIVE PERFORMANCE (\$000)

5.07 - BASE OPERATIONS (EXCLUDES 5.07.02)

Scope Description: The approved baseline scope for this WBS includes monitoring and maintaining the DSTs and equipment in compliance with Technical Safety Requirements, and Environmental, Safety, Health and Quality programmatic requirements. This also includes necessary support activities such as project management, engineering, business services, and support to training and procedures. Base Operations also provides site, shared, and miscellaneous services including Service Assessment Pool and Advanced Medical. In addition, PBIs and related fee distribution for completion of mission scope is included.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program-to-date¹	296,971.5	288,022.8	304,959.3	(8,948.7) -3.0%	(16,936.5) -5.9%	412,143.3
FYTD¹	34,526.0	34,410.3	32,687.5	(115.7) -0.3%	1,722.8 5.0%	157,609.6

¹Note: Program-to-date values used throughout the report reflect the current baseline as approved by the Energy Systems Acquisition Advisory Board and include fiscal years 2003-2006. The FYTD values used throughout this report are based on the Interim Baseline for fiscal year (FY) 2006.

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD unfavorable variance that is within the threshold of $\pm 10\%$ or \$1M. The program-to-date unfavorable SV is primarily due to the contract fee associated with PBI milestones not being earned as planned.

Impact: Earning capability has been adversely impacted.

Corrective Action: The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD favorable variance that is due to efficiencies in base operations and lagging progress and/or costs associated with various level-of-effort accounts. The program-to-date unfavorable CV is due to unplanned costs associated with vapor mitigation activities, and greater than planned

costs for Readiness-to-Serve, Site Wide Services, certain administrative functions, implementing the new work planning system, and work force restructuring. The unfavorable variance was partially offset by a cost pass-back for benefits in FY 2005.

Impact: The labor under runs in the Interim Baseline will continue, while the remaining variance will self-correct in coming months as costs are incurred. The negative performance in the program-to-date baseline is unrecoverable and is impacting ability to complete planned scope.

Corrective Action: Continue identifications of efficiencies based on the Interim Baseline; remaining variance will self-correct as the work is performed. The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

5.07.02 - ENVIRONMENTAL/TRI-PARTY AGREEMENT MILESTONE ACHIEVEMENT

Scope Description: The approved baseline provides for the safe and compliant storage of the Hanford Site tank wastes until waste is retrieved for processing (currently 53 million gallons of waste in 177 SSTs and DSTs and approximately 60 miscellaneous underground storage tanks (MUSTS). This includes monitoring and maintaining activities associated with the Hanford Federal Facility Agreement and Consent Order, commonly referred to as the Tri-Party Agreement. Scope includes compliance efforts to meet Tri-Party Agreement Milestones M-23, M-48, and M-46, including characterization, DST Space Management and DST Integrity. Scope includes transfer operations and the operations and maintenance of the 242-A Evaporator to reduce the volume of waste stored in DSTs. Work scope omitted from the Interim Baseline includes SST and DST Tank Farm Upgrades.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program -to-date	65,045.5	54,997.2	44,718.3	(10,048.3) -15.4%	10,278.9 18.7%	87,507.7
FYTD	5,363.4	4,732.9	4,208.1	(630.5) -11.8%	524.7 11.1%	18,774.2

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD unfavorable variance because of delay in AP Valve Pit assessment due to replanning the work package to allow for a manned entry, and resource availability issues. The program-to-date unfavorable variance is due to deferral of certain DST Infrastructure and Tank Farm Upgrades activities; delays in DST Ultrasonic Testing (UT) activities caused by vapor mitigation activities and the need to rescan two DSTs; and vendor-experienced software problems.

Impact: The Interim Baseline variance is expected to worsen over the next several months, but recover by fiscal year-end. The program-to-date unfavorable variance will result in some DST Infrastructure and Tank Farm Upgrades activities being deferred or deleted, and deferral of some UT activities to later in FY 2006.

Corrective Action: Actions being taken for the AP Valve Pit Assessment including installing a heated enclosure over the valve pit to lessen weather impacts will contribute to recovery of the schedule. The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD favorable variance due to delay in starting certain level-of-effort activities for the 242-A Evaporator and DST Facility Upgrades. In addition, there is a delay in the billing of construction contract costs for other DST activities that were not accrued. The program-to-date favorable cost variance is due to lower than planned level-of-effort support to DST waste transfers as a result of delays in SST retrievals, and under-runs in certain level-of-effort DST Space Management Project activities.

Impact: The variance for DST activities will self-correct as work is performed and costs are accrued.

Corrective Action: The Interim Baseline variance for the 242-A Evaporator will provide opportunities to fund other Evaporator activities. The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

5.08 - RETRIEVE AND CLOSE (EXCLUDES 5.08.02, PROJECTS, 5.08.05, RETRIEVALS & CLOSURE)

Scope Description: The remaining scope in the approved baseline for WBS 5.08 is Interim Stabilization, and installation and startup of the AP-101 Waste Transfer Pumping System. Work in this WBS removes pumpable liquids from SSTs to minimize the risk of leakage (referred to as "Interim Stabilization") and meet Consent Decree commitments. The scope also includes consolidation of some of the activities associated with interim isolation of tanks with retrieval and closure of SSTs. In the future, specific life cycle scope in this WBS also includes DST Retrieval and Closure and Closure of Long Term Facilities and Post Closure Monitoring. These activities are all outside of the CTD reporting window. With the completion of Interim Stabilization, this work scope has been omitted from the Interim Baseline.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program-to-date	9,074.9	9,044.8	8,410.1	(30.1) -0.3%	634.7 7.0%	9,250.1
FYTD	0.0	0.0	(0.3)	0.0 0.0%	0.3 0.0%	0.0

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline FYTD and the program-to-date favorable variances are within the threshold of $\pm 10\%$ or \$1M.

Impact: No impact.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The Interim Baseline FYTD and the program-to-date favorable variances are within the threshold of $\pm 10\%$ or \$1M. However, a favorable program-to-date variance for Interim Stabilization activities, which were completed under the estimated cost is offset by the AP-101 Transfer Pump Replacement, where costs were in excess of baseline estimates due to vapor mitigation activities and the use of significant amount of overtime.

Impact: No impact.

Corrective Action: The program-to-date variances for Interim Stabilization and AP-101 Transfer Pump Replacement are not expected to change as these activities are essentially complete.

5.08.02 - WASTE TREATMENT PLANT (WTP) FEED DELIVERY PROGRAM

Scope Description: The approved baseline provides Waste Feed Delivery management and engineering support. It also provides management of construction projects and startup and testing oversight. Emerging issues necessary to safely manage and perform work have expanded the scope of work performed in this WBS to include vapor mitigation efforts and stack relocation activities.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program-to-date	23,491.1	23,485.8	32,069.1	(5.3) 0.0%	(8,583.3) -36.5%	30,347.0
FYTD	1,595.5	1,574.1	1,317.5	(21.3) -1.3%	256.7 16.3%	7,488.4

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline FYTD and the program-to-date variances are within the threshold of $\pm 10\%$ or \$1M.

Impact: No impact.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD favorable variance that is due to efficiencies in Waste Feed Operations, and lagging progress and/or costs associated with various level-of-effort accounts. Additionally, contract staff is not being utilized as heavily as planned. The program-to-date unfavorable cost variance is due to greater than planned costs for support of vapor mitigation activities.

Impact: Increased costs are impacting ability to complete all planned baseline scope.

Corrective Action: Continue identifications of efficiencies based on the Interim Baseline; remaining variance will self-correct as the work is performed. The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

5.08.03.02 - PROJECT W-211 (10 DST RETRIEVAL SYSTEMS)

Scope Description: The approved baseline for this WBS element includes activities required to modify ten DSTs and associated tank farm infrastructure (e.g., pits and buildings) to enable retrieval and delivery of tank wastes to the WTP. Project W-211, Initial Tank Retrieval Systems, will install retrieval systems in 10 DSTs. As a result of work scope deferrals, the following work scope has been omitted from the Interim Baseline: AZ-101, AN-102, AP-102/104, AN-107 Retrieval Systems; AP-02A/02D Pit Upgrades; 10 DST Retrieval Systems (Project W-521); and 7 DST Retrieval Systems (Project W-522).

	BCWS	BCWP	ACWP	SV	CV	BAC
Program-to-date	31,409.5	18,976.2	19,878.1	(12,433.3) -39.6%	(901.9) -4.8%	48,558.3
FYTD	1,091.8	924.5	770.7	(167.3) -15.3%	153.8 16.6%	1,676.3

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD unfavorable variance due to delays in the startup of the AN/AP Transfer System, and closure (incentive fee) of the AN Infrastructure construction contract. Startup has been aligned to support the current transfer schedule. The program-to-date unfavorable variance is a result of deferring the AY-101, AY-102, and AZ-102 Retrieval Systems and the AN-101 Retrieval System construction and startup activities to later in FY 2006.

Impact: There is no adverse impact to the overall project and near term waste transfers.

Corrective Action: The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD favorable variance due to cost under-runs for construction of the AN-101 Retrieval System. The program-to-date unfavorable cost variance is primarily due to costs related to added scope, the as-built drawings effort, and vapor mitigation activities on the AN-101 Retrieval System.

Impact: Necessary work will be completed in accordance with the Project W-211 Ramp-Down Plan to support near-term waste transfers and C Farm retrieval in FY 2006. Project W-211 has a project-to-date favorable cost variance of nearly \$9M.

Corrective Action: None required.

5.08.04.01 - PROJECT W-314 (TANK FARM RESTORATION AND SAFE OPERATIONS)

Scope Description: The approved baseline for Project W-314 provides essential tank farm infrastructure upgrades to support waste feed delivery to the Waste Treatment Plant and to correct environmental compliance deficiencies with the tank farm support systems. Work scope includes waste transfer line installation, valve pit upgrades, ventilation system upgrades, instrument/control system upgrades, electrical distribution system upgrades and installation of a Master Pump Shutdown (MPS) system. The project scope includes Phase 1 and 2 upgrades in seven different tank farms (AN, AW, AY, AZ, AP, SY and A) as well as transfer system upgrades between tank farms. With completion of Project W-314 support to Tri-Party Agreement Milestone M-43-00, the AN and AZ Phase 1 Farm Upgrades work scope has been omitted from the Interim Baseline.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program to-date	34,767.7	31,633.7	38,982.9	(3,134.0) -9.0%	(7,349.2) -23.2%	34,767.7
FYTD	562.3	397.2	419.6	(165.0) -29.4%	(22.4) -5.6%	2,865.8

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD unfavorable variance due to 1) Waste Transfer System (WTS) Tie-in construction work and associated support slightly behind schedule as work has been aligned to support the WFO Cross-Site Transfer schedule, 2) Testing and turnover of WTS Tie-ins behind schedule as it has not started due to work priorities, and 3) the Monitor and Control System Test Bed assembly is behind schedule pending availability of electricians. The program-to-date unfavorable variance is primarily due to delays in field construction and successor activities as a result of changes to operational priorities, as-found field conditions, and vapor mitigation.

Impact: No impact to the Cross-Site Transfer.

Corrective Action: Schedule integration and priorities have been established to complete the WTS Tie-in construction and turnover to support the Cross-Site Transfer date. The Test Bed assembly will be completed as resources are available; however this activity is not on the critical path.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD unfavorable variance that is within the threshold of $\pm 10\%$ or \$1M. The program-to-date unfavorable variance is primarily caused by vapor mitigation activities and as-found field conditions, which resulted in additional effort in field construction, project management support, and

engineering.

Impact: The project will be completed with an unfavorable variance.

Corrective Action: The cost variance is not recoverable. Other than WTS leak detection, Project W-314 construction work has been stopped.

5.08.04.02 - PROJECT E-525 (UPGRADE TRANSFER SYSTEMS)

Scope Description: The approved baseline For Project E-525 provides for activities required to define, design, procure, construct, test, turnover, and manage modifications to a portion of the DST Transfer System. The scope of Project E-525 is further defined within the following five design/construction packages: 1) AZ-151 Catch Tank Replacement, 2) Clean-Out Box (COB) Modifications, 3) SY-Farm Transfer Lines, 4) 204-AR Load-Out Facility Transfer Line, 5) PFP Transfer Lines. These modifications brought a portion of the DST transfer system into compliance with Washington Administrative Code 173-303-640, in support of Tri-Party Agreement Milestone M-43-00.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program-to-date	14,787.1	12,125.7	24,646.8	(2,661.4) -18.0%	(12,521.1) -103.3%	15,489.5
FYTD	1,263.7	970.1	919.7	(293.5) -23.2%	50.4 5.2%	2,712.4

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD unfavorable variance due to behind schedule condition on the AZ-151 Catch Tank Bypass construction backfill caused by lack of necessary resources and cold weather in December. The program-to-date unfavorable variance is primarily due to delays and deferrals in Field Construction for the AZ-151 Catch Tank Bypass, SY-Farm Transfer Line Upgrades, and remaining AW-Farm COBs. Additionally, actions were taken early in FY 2005 to ramp-down project work and defer other activities in line with the Deferred Use Components List.

Impact: No Impact to the Interim Baseline, work will be completed as resources become available; estimated completion date is January 2006.

Corrective Action: The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD favorable variance that is within the threshold of $\pm 10\%$ or \$1M. The program-to-date unfavorable cost variance is primarily in Field Construction and is due to unplanned costs attributable to

unexpected as-found field conditions, enhanced work package development/approval, and vapor mitigation activities.

Impact: The project will have an unfavorable variance at completion.

Corrective Action: The project is nearing completion, and the variance is not recoverable.

5.08.05 - RETRIEVAL / CLOSURE PROGRAM

Scope Description: The approved baseline provides for Retrieval and Closure support activities in this WBS. Specifically, the scope includes program management, regulatory documentation, SST cross-site transfers, technology development, cold test facility management and maintenance, Vadose zone support, inactive waste sites administration, Tank Farm Support Facilities/Transfer Systems. The scope also includes the Closure Project (CP) TSR/Basic Maintenance on SSTs, CP Operations Essential Services, CP Field Projects/Upgrades, and the solid waste management programs.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program -to-date	100,145.0	89,735.9	109,160.9	(10,409.1) -10.4%	(19,425.0) -21.6%	133,490.1
FYTD	12,259.7	12,112.7	9,134.0	(146.9) -1.2%	2,978.7 24.6%	50,590.0

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD unfavorable variance that is within the threshold of $\pm 10\%$ or \$1M. However, this is the result of offsetting variances. Vadose Zone Corrective Actions has an unfavorable variance because existing field activities have been delayed due to addition of new scope for angle pushing at C-Farm and surface geophysical examination at S and T-Farms. Retrieval Technology Development's variance is favorable because the HRR-LDMM Leak injection task is being performed at a faster pace than planned. The program-to-date unfavorable schedule variance is primarily due to field work delays on Vadose RCRA Corrective Actions activities due to resource availability issues, vapor mitigation activities, and weather delays; delays on starting Tank Farm Risk Assessments modeling and waste constituent studies; delays in Liquid Level and Video Assessment, and hose-in-hose transfer line disposition activities due to vapor mitigation activities, radiological conditions, and weather delays.

Impact: There is no impact to the Tri-Party Agreement milestones that this activity supports.

Corrective Action: A hydraulic hammer direct push rig was developed and deployed to improve efficiency of data collection. A recovery plan for Vadose RCRA corrective actions has been implemented and incorporated into the Interim Baseline.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD favorable cost variance because of 1) lagging progress and/or costs associated with various level-of-effort activities such as the purchase of the Breathing Air Facility and wireless cameras; 2) the HRR-LDMM activity realized some contract efficiencies; and 3) Waste Management support costs are lower while contract pricing is being negotiated, and because of a lag

in receipt of costs for Department of Transportation Type A containers. The program-to-date unfavorable cost variance is due to unplanned CP surveillance and monitoring costs for vapor mitigation activities and the use of increased overtime.

Impact: The cost variance will diminish as costs are received and the Waste Management contracts are finalized.

Corrective Action: Continue identifications of efficiencies based on the Interim Baseline; remaining variance will self-correct as the work is performed.

5.08.06/07 - SST RETRIEVAL EAST / WEST AREA

Scope Description: The approved baseline provides for this element includes activities required for the retrieval of all 149 SSTs. The scope includes project management, design and engineering, retrieval procurement, retrieval system installation, and retrieval startup and readiness. Scope in this WBS also includes the operations of the SST retrieval systems. As a result of work scope deferrals A, B, SX, T-Farm, and some C Farm Retrievals have been omitted from the Interim Baseline.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program -to-date	109,410.5	39,932.5	121,275.3	(69,478.0) -63.5%	(81,342.8) -203.7%	163,162.3
FYTD	4,950.9	5,645.8	5,810.4	694.9 14.0%	(164.6) -2.9%	18,578.3

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a favorable variance due to 1) activities related to 241-C-108 Retrieval were initiated ahead of schedule, including redesign for change in receiver tank from AY-101 to AN-106, and procurement, planning, and construction activities, 2) reconfiguration of vacuum retrieval equipment from 241-C-201 to 241-C-204 is ahead of the baseline schedule to allow for an accelerated start of reconfiguration if field resources become available in the January/February timeframe, 3) Tank 241-C-201 experienced very productive retrieval of waste during the first week of December, and 4) Sampling and analysis for C-200 Tanks was initiated ahead of schedule. The program-to-date unfavorable schedule variance is due to delays in C Farm Modified Sluicing and Mobile Retrieval Systems design; C Farm retrievals due to vapor mitigation activities and as-found conditions such as the potential for gelling and high radiation; development of multiple retrieval systems and the need for multiple evolutions due to tank waste characteristics; and deferral of B, T, and U Farm retrievals.

Impact: Continued positive variance is at risk due to equipment problems related to Tank 241-C-201 retrieval. The program-to-date issues identified have caused an extension in the schedules for retrieval procurement, construction, and operations.

Corrective Action: The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD unfavorable variance that is within the threshold of $\pm 10\%$ or \$1M. The program-to-date unfavorable cost variance for SST retrievals is due to a realization of risks in the field for which no contingency was planned, including higher than planned material and fabrication costs, longer than planned retrieval durations, increased special equipment and engineering costs, re-work due to improvements to the work planning process, weather delays resulting in work stoppages, costs due to vapor mitigation activities, costs for a second pumping system for Tank 241-S-102, and costs for the partial retrieval of 241-S-109 test waste in support of the DBVS.

Impact: Unplanned program-to-date costs are impacting ability to complete all approved baseline scope.

Corrective Action: The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

5.08.12/13 - SST CLOSURE

Scope Description: The approved baseline provides the scope for tank farm closure which includes those activities required for interim closure of each tank in the farm, followed by closure of the entire farm once all tanks within the farm are interim closed. Scope for interim closure of each tank includes characterization, engineering evaluation and reporting, deactivation and isolation of transfer lines, pits and penetrations to the tank, and placement of a grout layer in the bottom of the tank to stabilize the residual waste. As a result of work scope deferrals, A, AX, B, SX, T, U-Farm, and some C and S Farm Interim Closure work scope has been omitted from the Interim Baseline.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program-to-date	20,741.2	6,887.2	10,337.8	(13,854.0) -66.8%	(3,490.6) -50.7%	38,672.5
FYTD	176.3	165.2	100.2	(11.1) -6.3%	65.0 39.3%	458.8

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD unfavorable variance that is within the threshold of $\pm 10\%$ or \$1M. The program-to-date unfavorable schedule variance is primarily due to the delays in the approval of the Tank Closure EIS ROD.

Impact: Closure of SSTs is dependent on the issuance of the EIS ROD.

Corrective Action: The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a negligible FYTD favorable variance. The program-to-date unfavorable cost variance is due to higher than planned costs for sampling and analytical work, and closure design and work package planning.

Impact: Increased costs are impacting ability to complete all planned baseline scope.

Corrective Action: The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life

cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

5.09 - TREAT & DISPOSE WASTE (EXCLUDES WBS 5.9.2.2/2.3/3.1/3.4)

Scope Description: The approved baseline provides for the remaining scope for 5.09, which include the Infrastructure Services that provide for electrical power to the WTP, Strategic planning including the support to Optimization Studies, Project W-QQQ support, and support to the M-62-08 deliverables. Also included are the Failed Melter Disposal System and future expansions to IDF. Both are outside of the Contract-To-Date reporting. Startup and Turnover, perform Operations Readiness Reviews (ORRs), and turnover of the constructed IDF to Operations is included in this WBS. Due to work scope deferrals, Project W-QQQ, M-62-08 Product Development, and the Failed Melter Disposal System have been omitted from the Interim Baseline.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program-to-date	24,695.0	21,878.3	15,681.2	(2,816.7) -11.4%	6,197.1 28.3%	34,583.9
FYTD	1,109.8	1,008.8	972.1	(101.1) -9.1%	36.7 3.6%	4,399.2

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD unfavorable variance that is within the threshold of $\pm 10\%$ or \$1M. The program-to-date unfavorable schedule variance is because of delay in Project W-QQQ (Hanford Shipping Facility) in order to fund higher priority work.

Impact: No impact.

Corrective Action: The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD favorable variance that is within the threshold of $\pm 10\%$ or \$1M. The program-to-date favorable cost variances are due to efficiencies realized in the FH support of the WTP interfaces and on Strategic Planning activities.

Impact: No impact.

Corrective Action: None required.

5.09.02.02 - TRU / LLW PACKAGING

Scope Description: The approved baseline provide for the design, construction, testing, operation, and decommissioning of a system to treat contact handled transuranic/mixed (CH-TRUM) waste for eventual shipment/disposal at the Waste Isolation Pilot Plant (WIPP). 1) CH-TRUM Waste Packaging: Nine tanks are currently thought to contain CH-TRUM waste: four T-200 series SSTs, four B-200 series SSTs, and T-111. 2) Remote Handled transuranic/mixed (RH-TRUM) Waste Packaging: Three tanks are currently thought to contain RH-TRUM waste: AW-103, AW-105 and SY-102. 3) LLW Packaging: activities required to operate a system to package LLW such that the packages can be sent to a licensed facility for disposal. One tank, T-110, is currently thought to contain LLW. The volume of LLW in this tank is approximately 400K gallons. As a result of work scope deferrals, RH-TRUM and Low-Level Waste Packaging have been omitted from the Interim Baseline.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program -to-date	28,623.2	11,975.4	19,841.7	(16,647.8) -58.4%	(7,866.3) -65.7%	40,832.6
FYTD	0.0	0.0	23.7	0.0 0.0%	23.7 0.0%	0.0

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD variance that is within the threshold of $\pm 10\%$ or \$1M. The program-to-date unfavorable schedule variance result primarily from permitting related delays in converting a Research, Development, and Demonstration (RD&D) permit into an extensive Part B permit; NEPA permitting and Part B certification issuance delays; and delays due to the ORP's decision to issue the Preliminary Documented Safety Analysis (PDSA) as new scope, in addition to the planned DSA amendment. Consequently, the ORP directed a ramp-down of the TRU project to place the project in indeterminate standby until resolution of NEPA and other permitting issues.

Impact: Permitting issues and regulatory uncertainty have delayed packaging operation planning such that completion of the first 284,000 gallons of tank waste by the end of FY 2006 is no longer practical.

Corrective Action: The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD unfavorable variance that is within the threshold of $\pm 10\%$ or \$1M. The program-to-date unfavorable cost variance result from unplanned costs for rework associated with NEPA document revision per the ORP, new scope to issue the PDSA, and the packaging vendor's inadequate design estimation.

Impact: A revised estimate at completion for the project has been developed and will be reflected in the life cycle baseline.

Corrective Action: The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance.

5.09.02.03/.05 - LAW TREATMENT

Scope Description: The approved baseline provides for Bulk Vitrification, Containerized Grout, Steam Reforming, and LAW Treatment. Bulk Vitrification activities which include 1) Issue Request for Proposal for Containerized Grout and Bulk Vitrification predowns; 2) Award contract to vendor for testing and engineering pre-conceptual design development; 3) Contract costs and provide support for vendor testing and design; 4) Issue pre downselect data package and support C3T decision process; 5) Prepare conceptual design for Hanford-deployable Steam Reforming (SR) unit [Phase 0]; 6) Award vendor contracts for testing and engineering preconceptual design development; 7) Process Pre-Treatment/Sulfate Removal, evaluate dissolution progress during S-102 and U-107 retrieval operations, evaluate high integrity containers (HIC) for cesium removal Post Down Select, Perform long-lead permitting activities, issue procurement package, and award contract for low activity waste (LAW) system construction; 8) Contract costs and provide support for vendor design, fabrication, and testing, issue design and implement field modifications for tank farm LAW system deployment; 9) Operate LAW system.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program to-date	39,478.9	26,100.9	68,279.1	(13,378.0) -33.9%	(42,178.2) -161.6%	48,078.7
FYTD	6,911.7	6,622.4	6,256.7	(289.3) -4.2%	365.7 5.5%	26,311.8

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD unfavorable variance that is within the threshold of $\pm 10\%$ or \$1M. The program-to-date unfavorable schedule variance is due to delays caused by technical issues associated with the failed melt container, additional environmental standard for the off-gas system, and delay in placement of procurements to determine if the specifications could be modified to reduce costs.

Impact: Schedule delays have impacted the startup of the Bulk Vitrification Test and Demonstration Facility.

Corrective Action: The program-to-date variances are being addressed by development of a revised life cycle baseline. The FY 2006 portion of this baseline (Interim Baseline) has been provided to the ORP for review and approval, and a first draft of the life cycle baseline has been reviewed with the ORP. The interim and life cycle baselines incorporate the increased cost of work due to vapors, technical issues associated with in-field project work, and work scope deferrals. Implementation of the Interim Baseline will provide management with a meaningful tool to assess baseline performance. Critical path and near-critical path activities (within 20 days of the critical path) are being actively tracked and managed through increased attention at the weekly status meetings.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a favorable cost variance due to level loading of DBVS design resources while actual performance will result in the majority of the costs being incurred later in the first half of the fiscal year. The program-to-date unfavorable cost variance is a realization of risks for which no contingency was planned, including higher than anticipated negotiated contract costs with AMEC (the primary DBVS subcontractor) for design, fabrication, and installation; and new project scope (ES-13).

Impact: The Interim Baseline cost variance has improved from last month and is now within threshold. The program-to-date cost variances for supplemental treatment will be addressed with the approval, and implementation of the life cycle performance baseline.

Corrective Action: Continue to manage authorized expenditures to ensure continued acceptable cost performance.

5.09.03.01 - INTEGRATED DISPOSAL FACILITY (IDF)

Scope Description: The approved baseline provides for the onsite expandable IDF for disposal of compliant Immobilized Low-Activity Waste (ILAW) waste stream packages produced at the WTP and the U.S. Department of Energy, Richland Operations Office (DOE-RL) generated mixed low-level waste (MLLW) and LLW. Plan, design, and construct the initial IDF. The IDF will consist of the initial capacity near-surface, remote-handled waste trench facility to support WTP Operations ILAW Production and the DOE-RL MLLW and LLW disposal quantities. Infrastructure necessary to provide operations and maintenance support (e.g., utilities, roads, and fencing) will be provided by this WBS.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program-to-date	28,659.2	28,992.6	18,227.2	333.4 1.2%	10,765.4 37.1%	31,899.8
FYTD	2,281.9	2,994.4	2,886.5	712.5 31.2%	107.9 3.6%	7,699.0

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD favorable variance due to level-loading of resources; however, the majority of the construction work is being performed in the first three months and tapering off with the construction completion expected by the end of March 2006, and close-out work being completed by August 2006. The program-to-date favorable variance is within the reporting threshold.

Impact: There is no long-term impact. The Interim Baseline variance will self-correct as the project completes this year.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The Interim Baseline FYTD variance is within the reporting threshold. The program-to-date favorable variance is due to the favorable fixed-price contract for the IDF.

Impact: No impact.

Corrective Action: None required.

5.09.03.04 - PROJECT W-464 (INITIAL IHLW STORAGE FACILITY)

Scope Description: The approved baseline provides for Project W-464, Interim Storage Facility which is a Canister Storage Building (CSB) Retrofit Subproject that addresses Initial Operations storage. This element provides onsite interim storage for Initial Operations IHLW canisters until they can be shipped to an offsite geological repository. The planning for receipt and interim storage of the IHLW canisters shall comply with the Waste Acceptance System Requirements Document and the Office of Civilian Radioactive Waste Management Waste Acceptance Preliminary Specifications. This WBS covers equipment for transportation of IHLW canisters from the WTP to the interim storage facilities. The work scope activities included under this WBS element are as follows: Provide Project Management (Capital) and project engineering required for execution of design, procurement and construction of the Interim Storage Facility. As a result of work scope deferrals, Project W-464 Permitting and Safety, Engineering, Procurement, and Contingency has been omitted from the Interim Baseline.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program-to-date	5,802.6	4,653.7	2,648.5	(1,148.9) -19.8%	2,005.2 43.1%	12,459.3
FYTD	25.3	25.3	10.4	(0.0) 0.0%	14.9 59.0%	109.4

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD variance that is within the threshold of $\pm 10\%$ or \$1M. The program-to-date reflects an unfavorable schedule variance due to deferral of work scope to FY 2009.

Impact: No impact.

Corrective Action: None required.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a negligible FYTD favorable variance. The program-to-date positive cost variance is due to efficiencies realized on the detailed design activity, resulting from favorable contract performance.

Impact: No impact.

Corrective Action: None required.

5.10 - ANALYTICAL TECHNICAL SERVICES

Scope Description: The approved baseline scope includes Analytical Technical Services management and Hanford services support in order to meet the capability / capacity requirements on the 222-S Laboratory complex for the Hanford mission. Also included are: 222-S Laboratory spares ; 222-S Laboratory spare reserves; provide capital equipment not related to construction (CENRTC); technology development activities; perform facility assessment and characterization activities; develop NEPA and other regulatory documentation, deactivation plans, post-deactivation surveillance and maintenance (S&M) plans; develop deactivation endpoints and turnover package; flush, isolate and blank process or sub-process systems; and remove radioactive and hazardous materials and mixed wastes. The sample analysis work scope has been transitioned to Advanced Technical Laboratories (ATL) and is therefore not included in the Interim Baseline.

	BCWS	BCWP	ACWP	SV	CV	BAC
Program -to-date	48,997.4	46,977.0	46,998.5	(2,020.4) -4.1%	(21.5) 0.0%	66,526.1
FYTD	5,094.6	5,094.6	4,060.4	0.0 0.0%	1,034.1 20.3%	22,226.8

SCHEDULE VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD variance that is within the threshold of $\pm 10\%$ or \$1M. The program-to-date unfavorable schedule variance is because of delayed 222-S Laboratory upgrades due to change in operational priorities.

Impact: The schedule for FY 2005 facility upgrades is not recoverable.

Corrective Action: Upgrades not performed in FY 2005 will be performed in FY 2006, or later, subject to funding availability and operational necessity.

COST VARIANCE

Description and Cause: The Interim Baseline reflects a FYTD favorable cost variance due to level-loading of resources for ATS scope; however, resource requirements will fluctuate throughout the fiscal year and the positive cost variance will diminish with time. The program-to-date unfavorable cost variance is within the threshold of $\pm 10\%$ or \$1M. However, unplanned costs have been incurred relative to the transition of the 222-S Laboratory analysis activities to ATL. Specific costs include ATL transition costs, Information Resource Management Desktop support, and Waste Management of lab samples. These costs have been offset by favorable variances elsewhere in the ATS program.

Impact: No impact.

Corrective Action: The Interim Baseline will self-correct over time. The impact of unplanned costs relative to the transition of 222-S laboratory analysis to ATL has been documented and will be reflected in the life cycle baseline update.

Milestone M-45-00, Complete Closure of All Single-Shell Tank Farms**SST Retrieval and Closure Program****I. Deliverables****• M-45-00, Complete Closure of all Single-Shell Tank Farms**

Due: 9/30/24

Status: On schedule

• M-45-00B, Complete Specified "Near-Term" SST Waste Retrieval and Interim Closure Activities, to Result in the Retrieval of all Tank Wastes in WMA-C SSTs Pursuant to the Agreement Criteria in Milestone M-45-00

Due: 9/30/06 (Or as otherwise indicated within the descriptive text of this milestone.)

Status: Milestone completion by due date is at risk. Current working schedule projects completion of some C-Farm retrievals extending beyond September 2006. ORP is evaluating the remaining scope, schedules and resource requirements for meeting this milestone.

- Completion of four limits of technology retrieval demonstrations:
 - Saltcake dissolution (S-112): Completed (M-45-03C)
 - Modified sluicing (C-106): Completed
 - Vacuum retrieval (C-200s): In progress; C-203 field retrieval operations completed on 3/24/05; C-202 retrieval completed on 8/11/05; C-201 retrieval in progress, over 80% complete as of 2/7/06; forecast completion of remaining C-200s fiscal year 2006.
 - Mobile retrieval (C-101, C-105, C-110, or C-111): C-101 start of retrieval is currently projected for fiscal year 2008.
- Implementation of full-scale LDMM technologies for the first three 100-series tank retrievals following Tank S-112:
 - Tank S-102: High Resolution Resistivity (HRR) system installed; supporting retrieval operations. Started HRR injection test on 1/20/06. Completed first phase of the calibration/injection test (3,050 gallons at 10 gallons/hour) on 2/2/06. Started second phase (approximately 3,000 gallons at 15 gallons/hour) on 2/13/06.
 - Tank C-103: HRR system operating in support of retrieval operations
 - Tank C-108: HRR system to be installed during May/June 2006 timeframe.
- Submittal of TWRWPs:
 - Tanks C-201, C-202, C-203, and C-204: Completed on 4/8/04
 - Two (2) 100-series tanks by 7/31/04: Completed on 7/29/04 (C-103 and C-109)
 - Four (4) 100-series tanks by 10/31/04: Completed on 10/8/04 (C-102, C-104, C-107, C-108, and C-112).
 - Five (5) 100-series tanks by 1/31/05: Completed on 1/24/05 (C-101, C-105, C-110, and C-111).

- Submittal of Waste Management Area (WMA) integration plans by 6/30/05:
 - WMA C: Completed; submitted from ORP to Ecology on 6/22/05
 - WMA T: Completed; submitted from ORP to Ecology on 6/22/05.
- **M-45-00C, Initiate Negotiation of SST Waste Retrieval and Closure Activities and Associated Schedules (for the Period February 2007 through August 2008)**
Due: 9/30/06
Status: On schedule
- **M-45-00D, Initiate Negotiation of the SST Waste Retrieval and Closure Activities (for the Period September 2008 to September 2013)**
Due: 1/31/08
Status: On schedule
- **M-45-00E, Initiate Negotiation of SST Waste Retrieval and Closure Activities for the Remainder of the SST Program**
Due: 10/31/12
Status: On schedule
- **M-45-05, Retrieve Waste from all Remaining Single-Shell Tanks**
Due: 9/30/18
Status: At risk
- **M-45-05-T05, Initiate Tank Retrieval from Five Additional Single-Shell Tanks**
Due: 9/30/07
Status: At risk
- **M-45-05-T06, Initiate Tank Retrieval from Five Additional Single-Shell Tanks**
Due: 9/30/08
Status: At risk
- **M-45-05-T07, Initiate Tank Retrieval from Seven Additional Single-Shell Tanks**
Due: 9/30/09
Status: At risk
- **M-45-05-T08, Initiate Tank Retrieval from Eight Additional Single-Shell Tanks**
Due: 9/30/10
Status: At risk
- **M-45-05-T09, Initiate Tank Retrieval from Ten Additional Single-Shell Tanks**
Due: 9/30/11
Status: At risk

- **M-45-05-T10, Initiate Tank Retrieval from 12 Additional Single-Shell Tanks**
Due: 9/30/12
Status: At risk
- **M-45-05-T11, Initiate Tank Retrieval from 14 Additional Single-Shell Tanks**
Due: 9/30/13
Status: At risk
- **M-45-05-T12, Initiate Tank Retrieval from 17 Additional Single-Shell Tanks**
Due: 9/30/14
Status: At risk
- **M-45-05-T13, Initiate Tank Retrieval from 20 Additional Single-Shell Tanks**
Due: 9/30/15
Status: At risk
- **M-45-05-T14, Initiate Tank Retrieval from 20 Additional Single-Shell Tanks**
Due: 9/30/16
Status: At risk
- **M-45-05-T15, Initiate Tank Retrieval from 20 Additional Single-Shell Tanks**
Due: 9/30/17
Status: At risk
- **M-45-06, Complete Closure of all Single-Shell Tank Farms in Accordance with Approved Closure/Post Closure Plan(s)**
Due: 9/30/24
Status: On schedule
- **M-45-06-T03, Initiate Closure Actions on a WMA Basis**
Due: 3/31/12 (See M-45-06)
Status: On schedule
- **M-45-06-T04, Complete Closure Actions on one WMA**
Due: 3/31/14 (See M-45-06)
Status: On schedule

II. Significant Accomplishments

- Completed DOE-HQ review of draft Single-Shell Tank Performance Assessment.
- Retrieved approximately 13% of C-103 waste and transferred to AN-106.
- Retrieved approximately 80% of C-210 waste and transferred to AN-106
- Completed fabrication and testing of C-103 slurry pump replacement
- Completed removal of failed slurry pump and installation of new slurry pump – system operational
- Started HRR injection test at S-102.

III. Significant Planned Activities in the Next Six Months

- Share results of SST Performance Assessment with Ecology, EPA, and NRC, submit for review and comment.
- Complete vacuum retrieval technology demonstrations at remaining C-200 tanks.
- Complete C-103 retrieval
- Complete HRR leak injection test at S-102.
- Complete installation of HRR leak detection system at C-108; begin collection of baseline data.
- Obtain Ecology approval of Mobile Retrieval System TWRWP.
- Continue development of SST system closure draft permit.
- Continue development of C-200 demonstration project.

IV. Issues

- M-45-00B commitment to retrieve all C-Farm tanks by September 2006 is unrecoverable.

SST RETRIEVAL SEQUENCE DOCUMENT

I. Deliverables

- **M-45-02M, Submit Biennial Updates to SST Retrieval Sequence Document (Agreement Appendix I, Section 2.1.2), Double-Shell Tank Space Evaluation Document and Ecology Concurrence of Additional Tank Acquisition**
Due: 3/1/06 (Parties to meet annually to agree on SSTs to be retrieved during the coming year from the tank pool.)
Status: On schedule
- **M-45-02N, Submit Biennial Update of SST Retrieval Sequence Document (Agreement Appendix I, Section 2.1.2), and Double-Shell Tank Space Evaluation Document and Ecology Concurrence of Additional Tank Acquisition Within 60-days (See Text of M-45-02M for further details)**
Due: 3/1/08 (Parties to meet annually to agree on SSTs to be retrieved during the coming year from the tank pool.)
Status: On schedule
- **M-45-02O, Submit Biennial Update of SST Retrieval Sequence Document (Agreement Appendix I, Section 2.1.2), and Double-Shell Tank Space Evaluation Document and Ecology Concurrence of Additional Tank Acquisition Within 60-days (See Text of M-45-02M for further details)**
Due: 3/1/10 (Parties to meet annually to agree on SSTs to be retrieved during the coming year from the tank pool.)
Status: On schedule

- **M-45-02P, Submit Biennial Update of SST Retrieval Sequence Document (Agreement Appendix I, Section 2.1.2), and Double-Shell Tank Space Evaluation Document and Ecology Concurrence of Additional Tank Acquisition Within 60-days (See Text of M-45-02M for further details)**
Due: 3/1/12 (Biennially thereafter. Parties to meet annually to agree on SSTs to be retrieved during the coming year from the tank pool.)
Status: On schedule

II. Significant Accomplishments

- Nothing to report

III. Significant Planned Activities in the Next Six Months

- Complete Biennial Updates to SST Retrieval Sequence Document / Double-Shell Tank Space Evaluation Document (M-45-02M)

IV. Issues

- Nothing to report.

TANK RETRIEVALS WITH INDIVIDUAL MILESTONES

Tank 241-C-106

I. Deliverables

- **M-45-05H, Interim Completion of Tank C-106 SST Waste Retrieval and Closure Demonstration Project**
Due: 6/30/04
Status: Completed
- **M-45-05L-T01, Complete Full-Scale C-106 Waste Retrieval**
Due: 11/1/03
Status: Completed
- **M-45-05M-T01, Submit C-106 Waste Retrieval Results, Analysis of Residual Waste(s), and (if appropriate) Request for Exception to the Criteria Pursuant to Agreement Appendix H**
Due: 2/27/04
Status: Completed

II. Significant Accomplishments

- Nothing to report

III. Significant Planned Activities in the Next Six Months

- Provide SST PA to NRC to complete their review of C-106 Appendix H exception request.
- Complete revisions to C-106 Appendix H documentation, incorporating Ecology and NRC comments and reflecting the Single-Shell Tank Performance Assessment

- Obtain Ecology and EPA approval of C-106 Appendix H exception request.

IV. Issues

- C-106 Closure Plan approval and SST Categorical Notice of Construction Phase 3 (closure) are pending completion of the Tank Closure and Waste Management Environmental Impact Statement and associated Record of Decision (ROD); forecast completion for the final EIS is June 2008.

Tank 241-S-102

I. Deliverables

- **M-45-05C, Complete S-102 Initial Waste Retrieval Project Construction (to Include all Physical Systems Including Those Necessary for Leak Detection, Monitoring, and Mitigation)**
Due: 3/31/04
Status: Completed
- **M-45-06C, Submit a Certified S-102 Component Closure Activity Plan, as an Application for a Modification to the Hanford Site-Wide Hazardous Waste Facility Permit to Ecology**
Due: 9/30/04
Status: Completed
- **M-45-05A, Complete Initial Waste Retrieval from Tank S-102**
Due: 3/31/07
Status: At risk.
- **M-45-15, Interim Completion of Tank S-102 SST Waste Retrieval and Closure Demonstration Project**
Due: 12/31/07
Status: At risk.

II. Significant Accomplishments

- Retrieved 54% of tank waste starting volume, estimated 212,000 gallons remaining.
- Received approval from Ecology on S-102 Functions and Requirements (F&R) and the High Resolution Resistivity (HRR) test plan to allow acceleration of the HRR injection test.

III. Significant Planned Activities in the Next Six Months

- Continue opportunistic retrieval operations.
- Perform HRR leak injection test.

IV. Issues

- The tendency for sodium phosphate to solidify may cause problems with retrieval. Evaluated the waste process impacts of sodium phosphate. Preliminary indications suggest control of sluice water temperature and dilution

rate may be effective in mitigating phosphate formation; sodium phosphate controls implemented.

Tank 241-S-112

I. Deliverables

- **M-45-06B, Submit a Certified S-112 Component Closure Activity Plan, as an Application for a Modification to the Hanford Site-Wide Hazardous Waste Facility Permit to Ecology**
Due: 9/30/04
Status: Completed
- **M-45-03C, Complete Full-Scale Saltcake Waste Retrieval Technology Demonstration at Single-Shell Tank S-112**
Due: 6/30/05
Status: Completed
- **M-45-13, Interim Completion of Tank S-112 SST Waste Retrieval and Closure Demonstration Project**
Due: 12/31/07
Status: On schedule.

II. Significant Accomplishments

- S-112 Functions and Requirements document (RPP-7825) updated and approved by Ecology for Salt Mantis (Remote Water Lance).
- Deployed Remote Water Lance installed in S-112 on November 17, 2005. Began operation November 18, 2005. Approximately 60% of the 31 Kgal heel has been removed as of 01/30/06.

III. Significant Planned Activities in the Next Six Months

- Complete the S-112 Remote Water Lance Demonstration.

IV. Issues

- Additional retrieval necessary to meet TPA-M-45-00 volume requirements of ≤ 360 cubic feet.

ACCELERATED C-FARM TANK RETRIEVALS

C-FARM ACCELERATED RETRIEVAL SUMMARY SCHEDULE FORECASTS

I. Deliverables: C-Farm Tanks

Tank	Final Design Drawings complete	Construction Complete	Process Control Plan Complete	Start Retrieval	Complete Retrieval	TSAP Complete	Retrieval Data Report or Appendix H to Ecology
C-101	Dec-04-06	Sep-17-07	Jul-16-07	Mar-06-08	Jun-07-08	May-15-08	Jan-20-09
C-102	Feb-05-07	Jun-08-07	Jun-18-07	Jan-23-09	May-18-09	Apr-09-09	Dec-22-09
C-103	Complete	Complete	Complete	Complete	May-16-06	Oct-24-06	Feb-14-07
C-104	May-23-07	Feb-01-08	Aug-20-07	May-18-09	Aug-25-09	Aug-24-09	Mar-30-10
C-105	Nov-27-07	Jul-10-08	Mar-20-08	Aug-26-09	Nov-13-09	Nov-11-09	Jun-24-10
C-106	Complete	Complete	Complete	Complete	Complete	Complete	Complete
C-107	Mar-02-09	Aug-05-09	Sep-21-10	Nov-05-10	Feb-10-11	Jan-24-11	Sep-02-11
C-108	Complete	Sep-29-06	Mar-29-06	Oct-03-06	Jan-22-07	Jul-12-06	Sep-18-07
C-109	Feb-21-08	Jul-18-08	Oct-06-08	Nov-16-09	Jan-04-10	Dec-09-09	Aug-11-10
C-110	Jul-18-08	Jan-27-10	Nov-06-08	Feb-26-10	Jun-15-10	May-25-10	Jan-24-11
C-111	Jun-11-09	Dec-21-09	Sep-09-09	Feb-11-11	Mar-22-11	Mar-03-11	Oct-10-11
C-112	Jan-09-09	Jul-22-09	Mar-30-09	Jun-16-10	Aug-16-10	Jul-30-10	Mar-25-11
C-201	Complete	Complete	Complete	Complete	Feb-09-06	Complete	Oct-05-06
C-202	Complete	Complete	Complete	Complete	Complete	Complete	May-15-06
C-203	Complete	Complete	Complete	Complete	Complete	Complete	Jan-18-06
C-204	Complete	Complete	Feb-28-06	Apr-18-06	Jul-06-06	Complete	Jan-31-07

NOTE: Completion dates are based on the C-Farm Integrated Management Execution Schedule (IMES) forecasts as of 1/26/06 and are subject to change as efforts continue to identify and implement schedule efficiencies.

II. Significant Accomplishments

- Submitted C-203 Retrieval Data Report to Ecology.
- Replaced failed slurry pump in C-103 and made available for operation on 1/31/06

III. Significant Planned Activities in the Next Six Months

- Complete retrieval of remaining C-200 tanks.
- Complete Process Control Plans for C-108, and C-204.
- Complete C-103 retrieval
- Complete installation of HRR leak detection system at C-108

IV. Issues

- Completion of C-Farm retrievals by September 2006 is unrecoverable.

Milestone M-46-00, Double-Shell Tank Space Evaluation**I. Deliverables:**

- **M-46-21, Complete Implementation of Double Shell Tank Space Optimization** Study recommendations (Tank Space Options report, Document No. RPP-7702, April 12, 2001)
Status: Completed December, 15, 2005
Due: 12/31/05

DST space scope is being tracked to implement four space optimization recommendations and tank space management efforts as identified below.

(1) Increase the DST fill height

Status: Complete. Safety Basis controls have been evaluated and will not need to be modified (Negative USQD). Controls needed to increase fill height in all AP Farm tanks have been placed within Operating Specification Document (OSD –T-151-00007)

(2) Reserve emergency space to reflect compliance with DOE Order 435.1 for the DST system

Status: Complete. DST Emergency Pumping Guide (HNF-3484) updated May 2003. WTP Emergency space shared with Tank Farms – Interface Control Document 19, August 2003.

(3) Implement tank-by-tank evaluations to allow greater concentration of wastes beyond current 1.41 SpG limit

Status: Complete. The Waste Compatibility Program document HNF-SD-WM-015 has been updated to revision 7 to allow tank farms to accept waste greater than a specific gravity of 1.41. Evaporator campaigns 2003-03, 2003-04, 2004-01 and 2005-01 were completed above 1.41 SpG. Additional upgrades are continuing to support handling higher SpG slurries in future evaporator campaigns.

(4) Use space currently identified as “restricted” space in tanks that contain staged feed for WTP

Status: Complete. ORP rescinded restrictions on tank space, letter 04-TPD-024, March 17, 2004. CH2M Hill incorporated changes to TF Waste Compatibility Program, HNF-SD-WM-OCD-015; on July 28, 2004 for approving transfers to Feed Control List (restricted WTP feed tanks).

II. Significant Accomplishments:

- Milestone was completed.

III. Significant Planned Actions in the Next Six Months:

- None

IV. Near-term Actions Needed by DOE or Ecology:

- None

V. Issues

- None

Milestone M-47-00, Complete Work Necessary to Support Acquisition and Phase I Operations of Hanford Site High-Level Radioactive Waste Treatment, Storage, and Disposal Facilities

I. Near-Term Deliverables:

- **M-47-02, Complete startup and turnover activities for required transfer system upgrades to allow transfer of first high-level waste feed to the Pretreatment/Treatment Complex.**
Due: 03/31/09
Status: Ahead of schedule.
 - W-314 completed construction of new transfer lines from AZ to AP tank farms (SN-634, SN-636, and SN-637)
 - W-211 completed AP to WTP transfer system construction.
 - W-211 completed AP-02A and AP-02D pit modifications construction.
 - Acceptance testing and turnover of transfer lines and jumpers has begun.
- **M-47-04, Complete startup and turnover activities for required transfer system upgrades to allow transfer of first low-activity waste feed to the pretreatment/treatment complex. Installation of the pump will not be required until necessary to support WTP waste feed activities.**
Due: 03/31/09
Status: Ahead of schedule.
 - AP-101 transfer pump was turned over to Operations December 29, 2004.
 - Transfer pump jumper installed May 2004.
 - Transfer piping is addressed in M-47-02.
 - Acceptance testing and turnover of transfer lines and jumpers has begun.
- **M-47-03A, Complete startup and turnover activities for waste retrieval and mobilization systems for selected initial high-level waste feed tank.**
Due: 03/31/09
Status: Ahead of schedule.
 - AZ-101 Retrieval system upgrades are near completion (w/exception of transfer pump installation)
 - Completed AY-102 Title II design.
- **M-47-06, Complete negotiation of additional agreement requirements (milestones, target dates, and associated language) governing work necessary to support completion of treatment complex Phase I operations by 2018.**
Due: 06/30/10
Status: Negotiations are not yet underway

II. Significant Accomplishments:

- Nothing to report

III. Significant Planned Actions in the Next Six Months:

- Operational Acceptance Testing of transfer lines and jumpers in East tank farm.

IV. Near-term Actions Needed by DOE or Ecology:

- None

V. Issues:

- Nothing to report

Milestone M-45,-50,-60 Single-Shell Tank Corrective Action**I. Near-Term Deliverables:**

- **M-45-55-T03, Submit to Ecology for review and comment as an Agreement secondary document a Field Investigation Report pursuant to the site-specific SST WMA Phase I RFI/CMS Work Plan addenda for WMA T, TX, and TY.**

Due: 07/30/05

Status: Complete, Delivered on 07/29/05. Ecology comments were received on 01/05/06. Responses to those comments are under development. Formal letter response and meeting anticipated.

- **M-45-55-T04, Submit to Ecology for review and comment a draft of the A-AX, C, and U Field Investigation Report.**

Due: 04/30/06

Status: Informal discussions are ongoing regarding scope and schedule for this report.

- **M-45-55, Submit to Ecology for review and approval as an Agreement primary document a Phase 1 RFI report integrating results of data gathering activities and evaluations for WMAs S-SX, T, TX-TY, A-AX, B-BX-BY, C, and U; and related activities, including groundwater monitoring and impacts assessment using Hanford Site groundwater models, with conclusions and recommendations.**

Due: 01/31/07

Status: On Schedule: The hydraulic hammer direct push system was successfully tested at angles of 30°, 45°, and 60° from the vertical in preparation for deployment at the C-152 pipeline leak. Work planning session with Operations for angle pushes in 241-C tank farm held 2/14. Anticipate entry Week of 2/27. Laboratory analyses of samples collected at TY are underway. Information collected from this effort and SGE work in T and S Farm HRR site will be included in the Phase 1 RFI rollup.

- **M-45-58, Submit to Ecology for review and approval as an Agreement primary document a RCRA Corrective Actions Corrective Measures Study for WMAs S-SX, T-TX-TY, B-BX-BY, A-AX, C, and U.**

Due: 06/30/07

Status: Forecast on schedule.

- **M-45-60, Submit to Ecology for review and approval as an Agreement primary document DOE's RCRA Corrective Actions Work Plan for SST WMAs.**

Due: 09/30/07

Status: Forecast on schedule.

II. Significant Accomplishments:

- Hydraulic hammer direct push system successfully demonstrated ability to deploy to distance of 100 ft at angles of 30°, 45°, and 60° from the vertical.
- Surface Geophysical Exploration field work at T farm using all drywells and nearby groundwater wells was completed on January 25.

III. Significant Planned Actions in the Next Six Months:

- Initiate Direct Push Technology investigation in 241-B, BX and T farms
- Initiate angle bore hole drilling in C-farm
- Initiate SGE work in C farm and collect post injection test data in S farm.

IV. Issues

- Viability of SGE to adequately interrogate below WMA needs to be resolved before additional deployments are attempted. Additional work to energize drywells has been done to help resolve vadose zone visualizations below tanks. Work initiated at S-102 attempts to bypass these issues by using the delta in resistivity values between the baseline and the post test conditions.
- The change package and negotiations for scope and schedule modifications of the Field Investigations and Reporting milestones is needed.

Milestone M-23-00, Tank Integrity and Monitoring**I. Near-Term Deliverables:**

- None

II. Significant Accomplishments:

- Nothing to report

III. Significant Planned Actions in the Next Six Months:

- M-23-26 requires completing liquid level assessments and video observation of 241-AX-IX, 241-AX-151, 241-BY-ITS-1 and 241-BY-ITS-2 facilities no later than December 31, 2006. In the next six months technical definition and work packages will be prepared and field work initiated for 241-AX-IX and 241-AX-151.

IV. Issues

- Nothing to report

Interim Stabilization Consent Decree

I. Near-Term Deliverables:

- **D-001-00, Complete Interim Stabilization of all 29 SSTs**

Due: 09/30/04

Status: Completed on 03/18/04 with discontinuation of pumping in U-108 and subsequent consultation with Ecology staff. Interim stabilization of S-102 and S-112 held in abeyance by third amendment to the Consent Decree; these two tanks are undergoing accelerated retrieval. ORP's obligation to interim stabilize S-102 and S-112 will be satisfied upon completion of accelerated retrieval operations.

II. Significant Accomplishments:

- Pumping of S-102 was thought to have been completed on 9/27/05 but subsequent liquid level measurements indicated that additional liquid removal was required. The tank was then pumped on 10/6/05 and liquid level measurements are again being evaluated. Latest readings indicate that the levels will stay below Interim Stabilization limits. A completion report was submitted to ORP in December 2005. The quarterly IS report was submitted to Ecology in January 2006.

III. Significant Planned Actions in the Next 6 Months:

- None

IV. Issues

- None

Milestone M-48-00, DST Integrity Assessment Program**I. Deliverables:**

- **M-48-14, Submit Written Integrity Report for the DST System**
Due: 3/31/06
Status: On schedule
- **M-48-15, Submit a Report to Ecology for the Re-examination of Six DSTs by Ultrasonic Testing**
Due: 9/30/07
Status: On schedule
- **M-48-00, Complete Tank Integrity Assessment Activities for Hanford Double Shell Tanks System**
Due: 9/30/07
Status: On schedule
- **M-48-07A, Complete Construction of the AZ-301 Condensate Return System and Pit Upgrades. This includes:**
Due: 10/31/05 for AZ-301 Condensate Return system and removal of AZ-151 Catch Tank System from service.
Completed on 10/24/05 and letter sent to Ecology on 10/31/05

Due: 3/31/06 for complete construction for the AP-106A Central Pump Pit Upgrade (Evaluate integrity of pit and replace pit coating if necessary).
Status: Unrecoverable due to work and resource constraints.

Due: 6/30/06 for complete construction for the 241-SY-B Valve Pit Upgrade (Evaluate integrity of pit and replace pit coating if necessary).
Status: On schedule. The SY-B field set-up activities are currently scheduled to begin at the end of February. Documentation to support this work such as special lift instructions, tool evaluations and temporary ECNs are currently being drafted. Temporary covers that function as a work platform are presently being designed with a fabrication request presently being processed. The work planning package is presently scheduled to be completed by February 23.

II. Significant Accomplishments:

- Completed the AP-102, AP-103, AP-104, AP-105 and AP-106 primary in-tank video activities.
- Completed painting and visual assessment activities associated with the AP Valve Pit.
- Began field preparations associated with the AP02D Pit clean, assess and paint activity.
- Incorporated review comments into SY-101, AN-103 and AN-104 UT reports. The aforementioned reports are being revised to include lower knuckle UT scan data. Reports are scheduled for release on February 17.

III. Significant Planned Actions in the Next Six Months:

- Perform encasement pressure testing at pits; AP06A, AW02A and AW06A.
- Perform assessments of pump pits AP02D and AP06A.
- Perform encasement pressure test of line SL-167 at AW-B valve pit.
- Perform encasement pressure testing at pit AP06A, cross-site transfer line and 222S lab transfer line.
- Perform AN-107 UT.

IV. Issues

- None

In Tank Characterization and Summary

As of February 22, 2006

I. Significant Accomplishments:

- Completed grab sampling of Tank SY-101 and SY-102 in support of cross-site transfer.

II. Planned Action within the next Six Months:

- Complete core sampling of Tank AW-105 in early March 2006.
- Continuation of BBI updates. A total of 41 BBI updates are planned for the 2nd Quarter of FY 2006
- Complete SST Closure DQO, Rev. 1 in March 2006. Revision 1 of the SST Closure DQO was provided for review on February 7, 2006.
- Complete Corrosion Probe DQO in April 2006.
- Complete Tank Emissions DQO, Rev. 2 in April 2006
- Complete Bulk Vitrification DQO, Rev. 1 in May 2006.
- Complete Evaporator DQO, Rev. 5 in June 2006.

III. Issues:

- None

Milestone M-90-00, Complete Acquisition of New Facilities, Modifications of Existing facilities, and/or Modifications of Planned Facilities, as Necessary for Storage of Hanford Site Immobilized High Level Waste (IHLW), Immobilized Low Activity Waste (ILAW), and Disposal of ILAW, and M-20-00, Submit Part B Permit Applications

I. Near-Term Deliverables:

- **M-20-56, Submit Canister Storage Facility Part B Permit Application**
Due: 6/30/03
Status: **Complete**
- **M-20-57, Submit ILAW Disposal Facility Certified Part B Permit Application to Ecology**
Due: 6/30/03
Status: **Complete**
- **M-90-09-T01, Complete Detailed Design of ILAW Disposal Facility Critical Systems to 80%**
Due: 5/30/03
Status: **Complete**
- **M-90-08, Initiate ILAW Disposal Facility Construction**
Due: 2/28/05
Status: **Complete**

Out year (Post 2006) milestones:

- **M-90-10, Initiate Placement of ILAW Waste Canisters in ILAW Disposal Facility**
Due: 8/31/08
Status: On schedule
- **M-90-11, Complete Canister Storage Facility Construction**
Due: 8/31/10
Status: On schedule

II. Significant Accomplishments:

- Completed erection of both Leachate Transfer Buildings and one of the two Crest Pad Buildings – January 2006
- Initiated installation of building internal systems and components – January 2006
- Initiated leak testing of the liners in the Leachate Storage Tanks – January 2006
- Initiated IHLW NOD Workshop meetings with Ecology – January/February 2006

III. Significant Planned Actions in the Next Six Months:

- Complete Air Permits – February 2006
- Complete liner installation and leak testing of IDF Leachate Storage Tanks – February 2006

- Complete Construction Quality Assurance Report for trench –February 2006
- Complete erection of second Crest Pad Building – February 2006
- Finalize Mitigation Action Plan – February 2006
- Complete installation of building internal systems and components – March 2006
- Complete IDF construction-March 2006
- Meet with Ecology to reconcile Risk Budget Tool concepts – March 2006
- IDF RCRA Part B Permit Issued – TBD
- Initiate Low- activity waste Federal Review Group (LFRG) review of IDF Performance Assessment – TBD

IV. Issues

- None

Milestone M-26-010, Calendar Year 2004 Land Disposal Restrictions Report, Table 3-4, Schedule for ORP Assessments for CYs 2005 through 2006**I. Near-Term Deliverables:**

- **Initiate assessment of 242-S and 242-T Evaporators**

Due: 9/30/2005 (third quarter 2005)

Status: Completed – Assessment initiated 9/28/05 with kick-off meeting with Ecology. CH2M HILL completed the assessment in December and submitted the report to ORP for review on 1/9/06. The report was transmitted to Ecology in February 2006.

Long-Term Deliverables: Out year (Post 2006) assessments:

- None

II. Significant Accomplishments:

- None

III. Significant Planned Actions in the Next Six Months:

- None

IV. Issues

- None

Hanford Waste Treatment and Immobilization Plant (WTP) Project

Project Summary

Estimate at Completion (EAC): BNI submitted an EAC for the project on December 22, 2005, which showed a project cost increase from \$5,406 million to \$8,777 million and project completion date extension from July 2011 to May 2017. The Office of River Protection (ORP) and the U.S. Army Corps of Engineers (USACE) are currently reviewing the EAC to ensure the basis for the estimate was correctly developed, the schedule can be accomplished, prior comments from ORP and USACE were addressed, and the risks are appropriately identified and quantified. ORP's review is scheduled to be complete mid March 2006 and the USACE will be completing its independent validation by summer 2006.

In addition, ORP required BNI to conduct, utilizing the industry's most qualified people both within and external to BNI: 1) a comprehensive review and analysis of the technical baseline focusing on the functionality of WTP process systems; and 2) a comprehensive review and analysis of the cost and schedule baseline. These reviews are scheduled to be complete the end of February 2006 and the end of March 2006, respectively.

BNI is in process of preparing a second submission of the EAC, due the end of May 2006, which will reflect the actual fiscal year (FY) 2006 appropriated funding of \$520.4M and any changes necessary from the industry expert reviews. The EAC received in May 2006 will be the basis used to establish a new baseline for the project in the late summer of 2006. The Department will be in a position where there is sufficient confidence in the project's technical, cost and schedule estimate to serve as a firm foundation to baseline the project, start discussions with regulators, and begin contract negotiations with BNI.

Project Overview: Through December 2005, engineering is 70% complete based on hours, construction is 31% complete based on quantities, and overall the Project is 37% complete based on dollars. During December an average of 370 craft and 320 non-manual staff were working on-site.

Design, procurement, and construction activities are continuing on the Low Activity Waste Facility (LAW), Balance of Facilities (BOF), and the Analytical Laboratory (LAB). Design and limited procurements are continuing on the Pretreatment Facility (PT) and the High Level Waste Facility (HLW), while construction has been dramatically slowed due to the reduced FY 2006 funding and the focus on creating a larger design backlog (This approach will allow more PT and HLW design to be available for construction when work resumes). In the last quarter of FY 2006 through the first quarter of FY 2007, the focus of construction activities will shift; PT and HLW construction activities will resume while LAW, BOF, and LAB construction activities will be significantly reduced. The following tables, Table 1 and Table 2, show the "Total Project Commodity Summary" and the Project Cost Performance Report.

Table 1: Total Project Commodity Summary					
	Engineering		Construction		Total Project
Commodity	Scheduled	Released	Scheduled	Installed	Budgeted
Concrete (yd3)	172,650	172,650	154,680	154,680	254,980
Structural Steel (ton)	14,048	14,048	7,022	7,022	34,419
Piping (LF)	544,760	544,760	56,930	56,930	864,610
Conduit (LF)	192,290	192,290	61,470	61,470	718,180
Cable Tray (LF)	47,760	47,760	7,800	7,800	95,980
Cable (LF)	378,810	378,810	160,530	160,530	4,333,940
HVAC Duct (lb.)	2,023,240	2,023,240	378,500	378,500	4,022,040

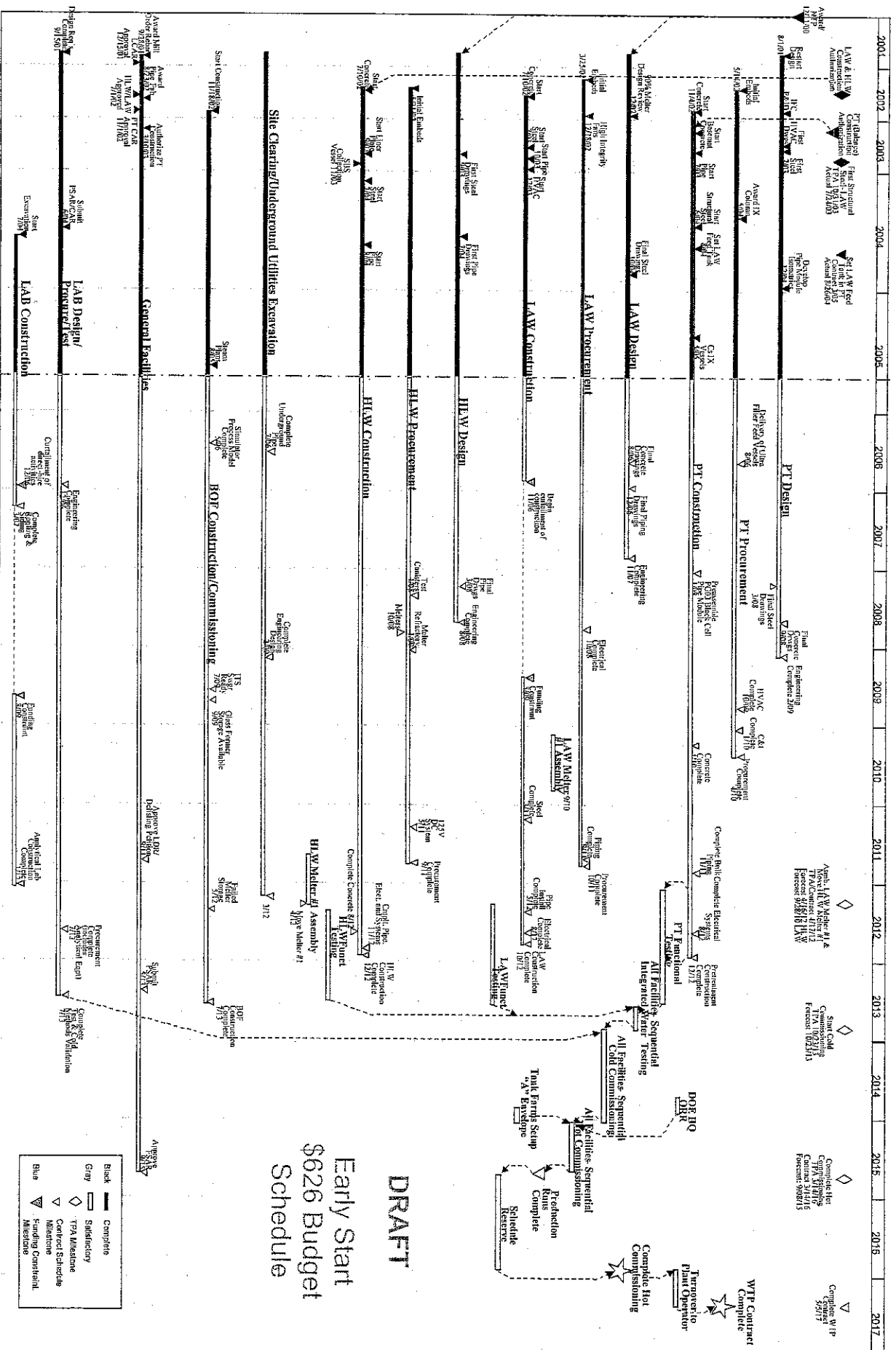
December 05 data – EAC commodity curves

Table 2: COST PERFORMANCE REPORT										
WBS[2] OBS[2] ITEM	CURRENT PERIOD					CUMULATIVE TO DATE				
	BUDGETED COST		ACTUAL COST WORK PERFORMED	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED	VARIANCE	
	WORK SCHEDULED	WORK PERFORMED		SCHEDULE	COST	WORK SCHEDULED	WORK PERFORMED		SCHEDULE	COST
1.01 Pretreatment										
Engineering	2,070	2,019	1,998	(51)	22	166,491	166,278	167,355	(214)	(1,078)
Plant Equipment and Material	5,572	4,368	6,506	(1,204)	(2,138)	182,939	180,185	182,595	(2,755)	(2,411)
Construction	1,875	1,701	2,029	(174)	(329)	151,331	150,944	145,703	(386)	5,241
WBS[2]Totals:	10,128	8,924	10,473	(1,205)	(1,549)	568,965	565,931	563,274	(3,034)	2,657
1.02 LAW										
Engineering	1,166	636	751	(529)	(114)	97,001	96,254	96,848	(747)	(594)
Plant Equipment and Material	5,410	4,948	4,183	(463)	765	89,264	87,563	90,936	(1,700)	(3,373)
Construction	2,991	2,281	2,828	(710)	(547)	74,931	72,978	72,844	(1,953)	134
WBS[2]Totals:	9,815	7,955	7,730	(1,860)	225	313,408	309,477	312,614	(3,932)	(3,137)
1.03 HLW										
Engineering	1,006	911	710	(95)	201	129,897	129,742	130,294	(155)	(552)
Plant Equipment and Material	3,904	3,140	3,779	(764)	(639)	116,614	118,781	116,448	2,167	2,333
Construction	940	905	699	(35)	206	65,064	65,473	59,228	409	6,245
WBS[2]Totals:	6,427	5,216	5,279	(1,210)	(63)	364,332	365,413	358,319	1,081	7,094
BOF Balance Of Facilities										
Engineering	348	204	233	(144)	(29)	37,005	36,783	36,996	(222)	(213)
Plant Equipment and Material	560	117	529	(442)	(411)	23,983	22,808	23,380	(1,175)	(572)
Construction	2,177	1,596	2,197	(581)	(601)	86,148	85,520	79,983	(628)	5,538
WBS[2]Totals:	3,092	1,936	2,981	(1,157)	(1,046)	150,957	148,943	144,224	(2,014)	4,719
1.06 Lab										
Engineering	317	169	291	(148)	(121)	25,459	25,195	25,599	(264)	(404)
Plant Equipment and Material	1,202	1,793	994	591	799	19,697	18,550	19,015	(1,147)	(466)
Construction	931	1,012	886	80	125	11,789	10,980	11,330	(809)	(350)
WBS[2]Totals:	2,671	2,995	2,439	324	557	62,924	60,565	62,004	(2,359)	(1,439)
Undistributed Bulk Materials										
WBS[2]Totals:	804	331	668	(473)	(337)	103,282	102,987	103,454	(294)	(467)
1.90 Shared Services										
WBS[2]Totals:	24,880	23,148	19,471	(1,731)	3,677	1,310,624	1,308,533	1,311,837	(2,090)	(3,303)
Total	57,817	50,505	49,575	(7,312)	930	2,874,492	2,861,850	2,855,311	(12,643)	6,539

Open Request from Washington State Department of Ecology (Ecology)

Ecology requested ORP to provide a summary of the current project schedule as part of the monthly TPA Project Manager's Meeting. The TPA requires the schedule show the lag between the project milestone and the associated TPA milestone. Below is the draft schedule provided by BNI in the December 2005 EAC submittal. This schedule, and related EAC cost and scope information, is currently under review by ORP, the USACE, and industry expert review teams. In addition, BNI is preparing a second submission of the EAC, due the end of May 2006. This EAC submittal will reflect the actual fiscal year (FY) 2006 appropriated funding of \$520.4M and any changes necessary from the industry expert reviews and will, in all likelihood, result in modifications to the schedule below.

December 2005 EAC



Pretreatment (PT) Facility

The PT Facility will separate the radioactive tank waste into Highly Level Waste (HLW) and Low Activity Waste (LAW) fractions and transfer each waste type to the respective vitrification facility for immobilization. Facility construction began November 2002 with the BNI December EAC showing a projected completion date of December 2012. Through December 2005, Engineering was 68% complete based on hours and construction was 26% complete based on quantities installed.

The PT construction has been ramped down and demobilization of the building is nearly complete. Materials and equipment has been removed from the north side of the facility and from all of 56' elevation floor slab. Unnecessary temporary facilities are being removed from the building and surrounding areas. Materials are being returned to the marshalling yard or storage locations at the site and equipment is being inventoried.

Engineering continues to check the design of the 300,000 feet of pipe, which was released prior to the introduction of the revised seismic design criteria, to ensure the design is adequate for the revised seismic loads. Findings to date are showing that between 10% and 15% of the pipe hangers will need to be modified. The vessel fabricators are continuing to check fabricated vessels (including the black cell vessels) to determine if additional reinforcing will be needed in light of the new seismic design criteria.

BNI has completed their analysis of the thirteen generic design solutions for controlling hazards resulting from hydrogen accumulation in piping and ancillary vessels (HPAV). Most of the solutions have been incorporated in the piping and instrument drawings and are being added to the design model. The length of time that it has taken to complete evaluation of the generic solutions and the control alternatives for the PJMs has impacted the preparation of the Authorization Basis Amendment Request (ABAR) for HPAV. The completion of this work hinges on the ability to complete the section on the PJM controls. Even though the schedule is very tight, BNI is committed to submitting the ABAR to ORP by March 20, 2006.

High Level Waste (HLW) Vitrification Facility

The HLW Facility takes the HLW fraction of the treated waste from the Pretreatment Facility and immobilizes it through vitrification. Facility construction began July 2002 with the BNI December EAC showing a projected completion date of December 2012. Through December 2005, Engineering was 77% complete based on hours and construction was 22% complete based on quantities installed.

Removal of materials and equipment from the HLW site is complete. All the gang boxes have been removed from the facility and relocated to an on-site warehouse where the contents will be inventoried and reorganized to support resumption of construction activities. Form work has been removed except for some walls that could be placed as fill-in work. Jib cranes, tool sheds, piping, and formwork have been moved from the facility to onsite secure storage.

The joggles for the HLW facility have been re-classified to the quality and seismic level of the wall they penetrate. This resulted in changes to the specification, inspection, and installation requirements. The number of joggles is also increasing in order to accommodate the increasing number of scheduled and unscheduled wiring that must penetrate shield walls.

Mechanical Systems has issued the piping and instrumentation diagram (P&ID) for the high level waste concentrate receipt (HCP) system. This is the first of the series of HLW P&IDs that will be issued during 2006.

HLW Engineering is continuing with the structural steel analysis at the 14' level to ensure it meets the Revised Ground Motion criteria. They are also continuing with: designs for the 37' level slab and wall form work and embeds; platform calculations and drawings for the 37' level; and, designs for the HVAC ductwork and supports for the 58', 72' and 91' elevations.

Low-Activity Waste (LAW)

The LAW Facility takes the LAW fraction of the treated waste from the PT Facility and immobilizes it through vitrification. Facility construction began in July 2002 with the BNI December EAC showing a projected completion date of October 2012. As of December 2005 engineering was 89% complete based on hours and construction was 42% complete based on quantities installed.

All fourteen process cell vessels have been delivered to the site and placed into the facility. At the +28' elevation the de-mineralized water tank and the caustic blow-down tank are in place. Construction placed 408 cubic yards of concrete for the container bay on the east side of the building and 200 cubic yards of concrete for a slab on the +48' elevation. The two melter process cell consumable change out cranes were delivered and placed on their rails. The twelve air displacement slurry (ADS) pumps for the melter feed vessels were delivered from the manufacture. Six ADS pumps will go into the feed vessel for melter #1 and six into the feed vessel for melter #2. The ADS pumps will supply melter feed from the process cells to the melter nozzles. The key construction activities in the next few months will be installing girders and sag rods for the main building siding, installing siding, and installing roof decking. There is one large concrete placement on the +48 elevation left and it is scheduled to be completed by the end of March.

During the first week of January 2006, BNI determined that coatings already installed on the LAW Facility (and to a lesser extent in the PT facility) show damage from moisture accumulation from recent rains in late December. Much of the coatings have bubbled and delaminated in over one third of the columns from moisture intrusion. On January 25-26, 2006, a factory representative from the manufacturer of the intumescent fire coating was on site to evaluate the damage and make recommendations for repair and recovery. The manufacturer representative confirmed the material is repairable; however, the material is listed as interior use and must be protected from weathering and moisture. Although a weather type protective seal coating was applied to the top of

the intumescent coating, the seal coat was not effective, most likely due to the inability to completely seal the fire coating where the structural elements intersected floor flashing at the ceiling/roof decking. It is also apparent BNI and their application subcontractor did not understand this vulnerability and left the material exposed to rain. In addition to the repair strategy, BNI is evaluating alternative fire protection to the structural members and sequencing advantages to enclose the building with siding prior to complete repair or alternative protection. Finally, OPR is insisting BNI address future operational issues of the material for the life of the facility on all anticipated and unanticipated environments of the plants.

Analytical Laboratory (LAB)

The Radiochemical LAB will incorporate features and capabilities necessary to ensure efficient WTP operations including: (1) receipt/handling of Hanford Tank Farm samples for waste feed acceptance; (2) process control; (3) waste form qualification testing; (4) environmental and authorization basis compliance; and (5) limited technology testing. To mitigate technical risks and for cost advantages, the LAB will outsource low level and non-radioactive (environmental) samples. Facility construction started on July 2003 with the BNI December EAC showing a projected completion date of January 2012. As of December 2005, engineering was 87% complete based on hours and construction was 34% complete based on quantities installed

Five exhaust heat exchanges, eight safe change HEPA filter housings, and a decon/glovebox monorail were delivered to the site. Construction completed concrete placement of a slab (~ 130 cubic yards) and continued with: installation of encast liners, rebar, conduit and joggles, and embeds in support of four wall concrete placements; grillage and embed installation for one wall placement; installation and testing of in slab pipe; installation of pump pit rebar slab and walls at the -8' elevation; and, installation of pipe spools and sleeves in two pump pit walls.

Engineering continues to work to drive clamshell and anchor bolt deficiencies to closure. Deficient equipment which is accessible or yet to be installed will be repaired and/or replaced. For equipment currently embedded in concrete, engineering is preparing fit for function justifications intended to support a final disposition of 'use as is'. The structural steel installation is forecast to begin February 2006 and end July 2006. Due to technical and management deficiencies identified during the root cause analysis of the LAB structural steel design, BNI engineering initiated and continued assessment/systems verification of the radiological liquid waste disposal and C5 ventilation systems design. The primary objectives of the assessment are to: 1) evaluate the design of Additional Protective Class and Important-to-Safety systems, structures and components in order to ensure functional oversight is effectively performed; and, 2) verify the facility and systems are designed in accordance with specified requirements.

Balance of Facilities (BOF)

The BOF sub-project provides essential site services to all production and service facilities at the WTP. BOF includes multiple facilities of varying sizes that will provide

such items as electrical power, roads, security, water, steam, glass former storage, chemical treatment, and air systems. Facility construction began in November 2002 with the BNI December EAC showing a projected completion date of July 2013. As of December 2005 engineering is 81% complete based on hours and construction is 66% complete based on quantities installed.

The fourth air dryer for the chiller compressor (five in total) and over 100 pipe spools for underground radiological and utility lines were received on site. With the exception of miscellaneous architectural finishes, construction completed installation of the Water Treatment Plant building shell. Construction continued with: electrical raceway and architectural finishes installation in the Water Treatment Building; assembly and installation of structural steel and installation of pipe headers, hangers and lateral piping for the Chiller Compressor Building; and, utility and radiological piping installations and testing in various locations.

Engineering completed the process model for the Glass Former Storage Facility (GFSF), which is integrated into the WTP site wide process model and continued design activities for the Failed Melter Storage Facility, Glass Former Facility, Wet Chemical Facility, ITS Switchgear Facility, underground/embedded conduit, electrical diagrams, and electrical load lists. Most of the major equipment for the Chiller Compressor Plant (CCP) is on-site and being maintained under the preventative maintenance program as required. As agreed to by BNI and the vendor, Atlas Copco, independent visual inspections of the CCP dryers are being performed by Northwest Inspection and repairs/rework of identified deficiencies will be done by Parsons locally. Inspections will be done against the following three standards/requirements: (1) the fabricators standard, Henderson; (2) ASME B31.3 type Category D fluids; and (3) ASME B31.3 normal fluids. Four of the dryers have been shipped to Parsons for an independent inspection, scheduled to complete January 20, 2006. The fifth dryer will be inspected at the fabricator shop prior to shipment to Parsons for necessary repairs.

Significant Planned Actions (next six months):

Facility	Milestone	Scheduled	Projected
HLW	Receive Canister Decontamination Vessels	06/06	06/06
	Receive Waste Neutralization Vessel	08/06	08/06
	Receive four High Efficiency Mist Eliminators	08/06	08/06
LAW	Set all +3' elevation major process vessels	07/04	03/05A
	Complete placement of slabs at el. +28'	05/05	10/05A
	Start roofing q-deck installation		11/05A
	Start siding installation for main building		02/06
PT	Complete HPAV Implementation	03/06	03/06
	Completion HVAC Equipment Data Sheets	04/06	04/06
AL	Complete Installation of Basemat and In-slab Pipe	08/05	02/06
	Complete Cold Method Development for Laser Ablation (Phase 1)		09/05A

Facility	Milestone	Scheduled	Projected
	Complete Cold Method Development for X-ray Fluorescence (P1)	12/05	03/06
	Initiate Structural Steel Installation	08/05	02/06
BOF	Complete Steam Plant Construction	05/05	12/05A
	Complete 8 Field Erected Tanks Construction	01/05	12/05A
	Complete Main Switchgear Facility	07/05	03/06
	Complete BOF Switchgear Facility (91) Construction	02/05	01/06
	Delivery of Glass Former Facility Major Mechanical Equipment	11/05	06/06
	Erect Water Treatment Plant Shell	11/05	12/05A

Milestone M-62-08

Full-Scale Test 38-C

Test is scheduled to occur in late April and will run for approximately 6 days to produce 42-44 Mtons of glass with S-109 simulant.

The test objectives are:

- Replicate no free iron in melt
- Demonstrate System operation without positive pressure
- Demonstrate full box
 - Use S-109 simulant (60% greater nitrate inventory)
 - Spike with DET metals for DET determination data
 - Validate Re scale down (Rule of 6 factor)
- Demonstrate Improvements
 - Refractory Design
 - Dry waste mechanical feed system
 - Initial batch loading (1 to 2 “dryer” batches)
 - Continued pressure/temperature monitoring

Full-Scale Test 38-B

Data is still pending on the test and will be completed in April.

Initial data is as follows:

- Whitish layer observed in the melt is unincorporated zirconia (38-C will use zircon) imbedded in a glass matrix
- Metal slag measured was 0.73 kgs (estimated 1.13 kg for a full box) – reduced from the 250 kgs observed in 38-A1.



No-Iron Glass Formulation Results

Three no-iron glass formulations were produced. Each had a portion that was quenched cooled and a portion that was slow cooled.

Preliminary results:

- VHT Levels as low as current iron-baseline glass for both quenched and slow cooled glass
- TCLP results similar to iron-baseline glass quenched glass (slow cooled glass results are still pending)
- PCT extractions are awaiting analysis
- No metal slagging was observed in these formulations
- No secondary phases of any kind were observed.